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Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 5/17/2024

Return Request: 5/27/2024

Project: CALS Main Library Renovations

Supplier: Powers of Arkansas

Manufacturer: Enviro-Tech

Submittal: Fan Coil Units

Submittal Number: 23 82 19-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Polk Stanley Wilcox
801 South Spring St.
Little Rock, AR 72201
501-378-0878

ENGINEER

Bernhard
1 Allied Drive, Bldg. 2, Suite 2600
Little Rock, AR 72202
501-666-6776

GENERAL CONTRACTOR

CDI
3000 Cantrell Rd.
Little Rock, AR 72202
501-5666-4300

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

23-8016

dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117



SUBMITTALS

CALS Main Library Renovation

**Powers of Arkansas
5440 Northshore Drive
North Little Rock, AR 72118**



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Submittal	Products	Manufacturer	Spec #	Page
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**Powers of Arkansas
5440 Northshore Drive
North Little Rock, AR 72118**



SUBMITTAL

PRODUCT	Fan Coil Units
SPECIFICATION	23 82 19
MANUFACTURER	Enviro-Tec
JOB NAME	CALS Main Library Renovation
LOCATION	Little Rock, Arkansas
ENGINEER	Alex Halloran
CONTRACTOR	Comfort Systems
CONTRACTOR POC	Daniel Pierce
DATE	5/8/2024
SUBMITTED BY	Contractor Sales: Eric Blaylock Engineering Accounts: Josh Faulkner



Project Name: CALS Main Library Renovation ETI Contract No: Contract #
 Location: Coil Version: 7.05b
 Consultant/Engineer: Printed Date: 5/8/2024 12:54:16 PM
 Contractor: Selection Date: 2/29/2024 9:11:55 AM
 Sold To: Last Revision Date: 2/29/2024 9:10:49 AM
 P.O. No: PO

Performance Data Sheet

Unit Tag	Qty	Model	Air Flow	Total Duty	Sensible Duty
FCU-2-01, FCU-3-01, FCU-4-01, FCU-5-01	4	HPP18	1075 CFM	- Btuh	76,622 Btuh

Unit Data

Model Size : 18	(Fans) Speed : (2) High	Filter	: 1" Throwaway	Coil Tube Dia.	[in.] 1/2
Type : Horizontal High Performance	(Motors) HP : (2) 1/3	Filter (Qty) Size	: (1) 16x20, (1) 16x25	Tube Wall	[in.] 0.025
	Motor FLA : 9.6	Filter Face Area	[ft²] 4.61	Coil Face Area	[ft²] 4.58
	Motor Type : ECM 3 SPD			Weight*	[lb] 244
	Capacity : High Capacity				

Output Data

Altitude	[Ft.]	0
Air Flow Rate	[CFM]	1075
ESP	[in.wg]	0.78
Chilled Water Coil Data		
EAT DB/WB	[°F]	80.0/ 67.0
LAT DB/WB	[°F]	58.5/ 56.6
Total Capacity	[Btuh]	35,028
Sensible Capacity	[Btuh]	25,718
EWT/LWT	[°F]	45.0/ 56.0
Fluid Flow	[gpm]	6.70
Fluid P.D	[ft.wg]	2.18
Fluid Velocity	[fps]	2.20
Rows / FPI / Circuits	:	3 Row / 12 FPI / 6 Ckt
Coil Connection Size:	[in.]	1.125
Hot Water Coil (Pre-Heat) Data		
EAT DB	[°F]	70.0
LAT DB	[°F]	133.8
Sensible Capacity	[Btuh]	76,622
EWT/LWT	[°F]	180.0/ 140.7
Fluid Flow	[gpm]	3.90
Fluid P.D	[ft.wg]	2.85
Fluid Velocity	[fps]	2.60
Rows / FPI / Circuits	:	2 Row / 12 FPI / 3 Ckt
Coil Connection Size:	[in.]	0.875

Options

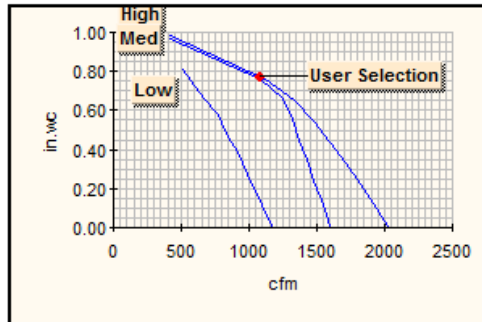
- Auxiliary Drip Pan- Galvanized Auxiliary Drip Pan
- BC02 24V, Unit S/S Relay / Fan Op. Relay & Transformer
- Coil Casing- Galvanized Casing
- Control Enclosure Handing- Opposite of Coil 1
- Discharge Air Sensor- OC026
- Enclosure Mount- Unit Mounted
- Filter Bottom Access
- Galvanized Drain pan
- Motor Control- 3 Speed Fixed
- OC011 Drain Pan Float Switch
- OC012 Toggle Disconnect Switch - 15 amps
- Rear Return
- Standard Fiberglass
- Thermostat Location- Remote Mounted Thermostat
- Thermostat- P11 Digital Programmable - 4 Pipe Heat/Cool - A/C
- Hot Water Coil: Piping Package Size - 1/2"
- Hot Water Coil:2 Position Close-Off (24v Only)
- Hot Water Coil:3-Way Control Valve
- Hot Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Hot Water Coil:Factory Mounted Piping Package
- Hot Water Coil:Manual Air Vent
- Hot Water Coil:P/T Ports
- Hot Water Coil:Package Code- Code: 36 (Manual Ball Valve with Memory Stop)
- Hot Water Coil:Right Hand
- Hot Water Coil:Unions
- Hot Water Coil:Y-Strainer- Y-Strainer with Blowdown
- Chilled Water Coil: Piping Package Size - 1/2"
- Chilled Water Coil:2 Position Close-Off (24v Only)
- Chilled Water Coil:3-Way Control Valve
- Chilled Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
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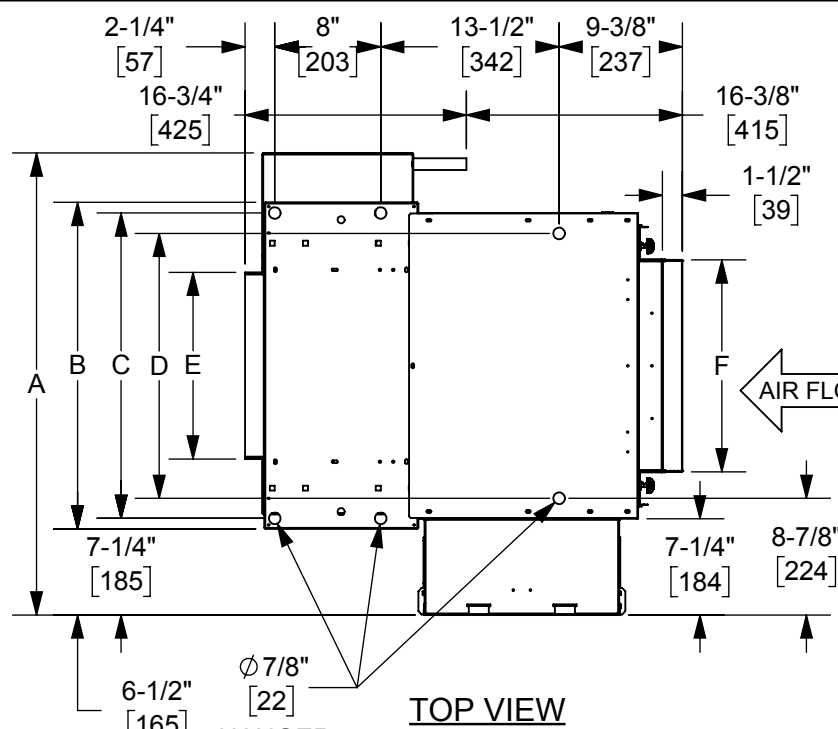
Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#
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Electrical Data		
Motor Voltage	[V/P/Hz]	115/1/60 ECM 3 SPD
Total Full Load Amps	:	9.60
MCA / MSCP	:	10.80 / 15.00
Fan Power Input	[Watts@CFM]	312.00
3-Phase Neutral Amps	[Amps]	16.60

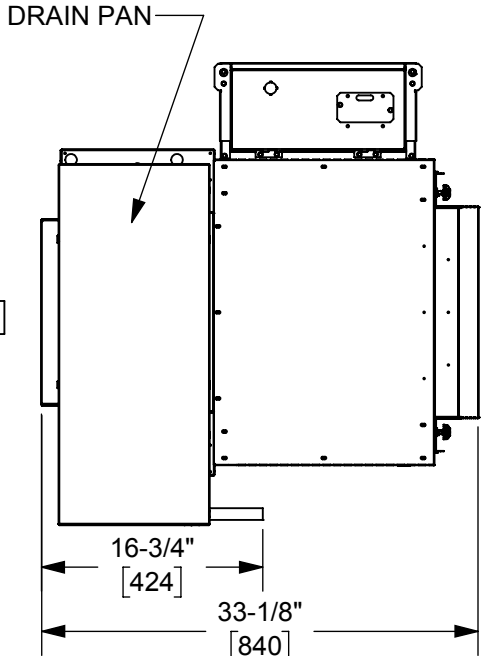
Sound Data Calculated at 1075 CFM and 1179 RPM							
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Ducted Discharge	71	67	66	66	64	60	50
Casing Radiated Free Inlet	71	68	65	65	62	59	52

- * Unit weight includes unit with wet coil(s) as selected.
 - o Does not include accessories
- Unit pressure drop and air flow based upon dry coil as required by AHRI-440.
- Sound data tested in accordance with AHRI-260-2012
- Sound Data Calculated at 1075 CFM and 1179 RPM
- Scheduled motor information is for Fan Input Power at High Speed.
- For 0' altitude the coil selection has been made at Standard Conditions.

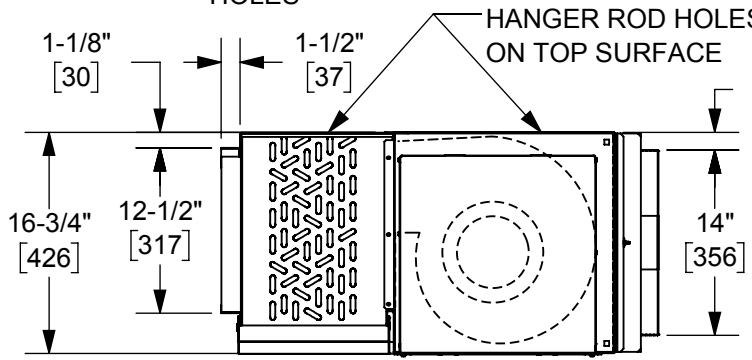




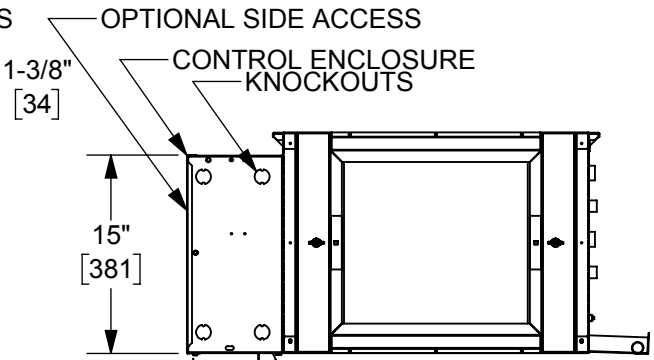
TOP VIEW



BOTTOM VIEW



SIDE VIEW



BACK VIEW

CONTROL ENCLOSURE
BOTTOM ACCESS DOOR
(OPEN POSITION)

NOTES:

1. All dimensions in Inches [millimeters]. All dimensions ±1/4" [6mm]. Metric values are soft conversion.
2. Right hand unit shown, Left hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections and includes (4) knockouts on (2) sides. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.

DIMENSIONS

UNIT SIZE	A	B	C	D	E	F
06	34-7/8" [886]	24-3/4" [629]	23-1/8" [587]	20" [508]	14" [356]	16" [406]
08	39-7/8" [1013]	29-3/4" [756]	28-1/8" [714]	25" [635]	19" [483]	20" [508]
10	43-7/8" [1114]	33-3/4" [858]	32-1/8" [816]	29" [737]	23" [584]	25" [635]
12	48-7/8" [1241]	38-3/4" [985]	37-1/8" [943]	34" [864]	28" [711]	32" [813]
14	53-7/8" [1368]	43-3/4" [1112]	42-1/8" [1070]	39" [991]	33" [838]	36" [915]
16	58-7/8" [1495]	48-3/4" [1239]	47-1/8" [1197]	44" [1118]	38" [965]	40" [1016]
18	63-7/8" [1622]	53-3/4" [1366]	52-1/8" [1324]	49" [1245]	43" [1092]	45" [1143]
20	67-7/8" [1724]	57-3/4" [1467]	56-1/8" [1426]	53" [1346]	47" [1194]	50" [1270]

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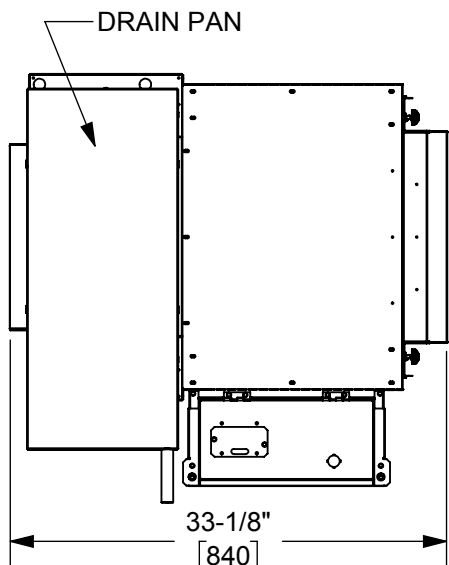


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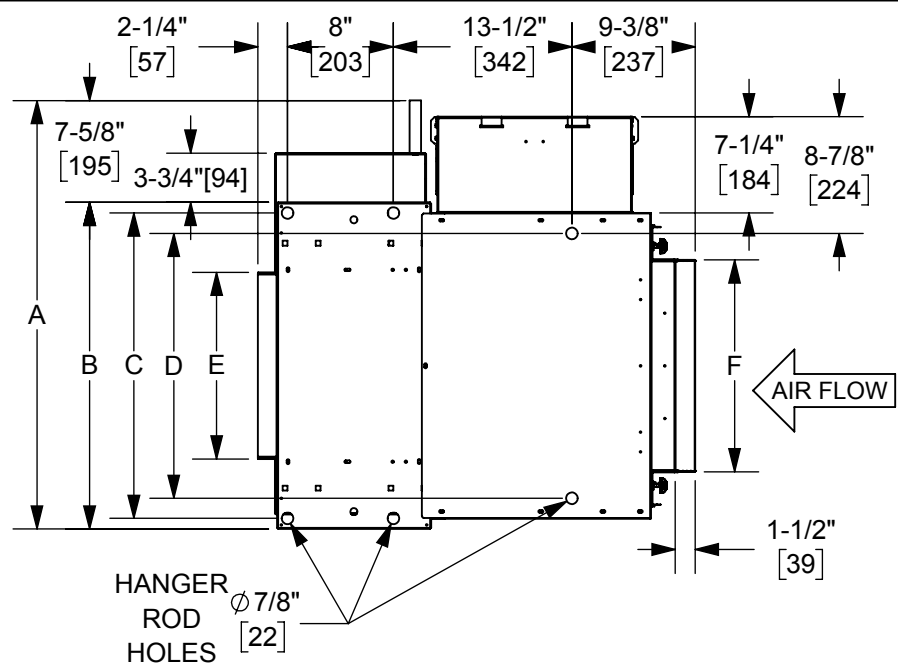
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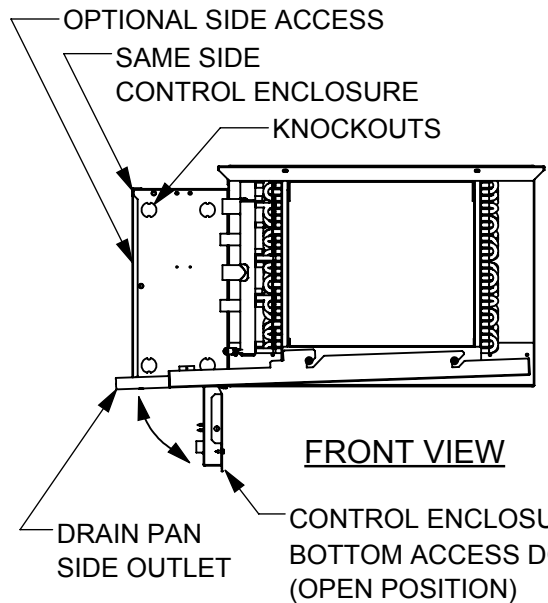
TITLE: MODEL HPP 2-PIPE OR 4-PIPE W/O ELECTRIC HEAT		DATE: 4/15/2020	SHEET: PAGE 1 OF 2	DRAWING NO: 82-80036	REV: B
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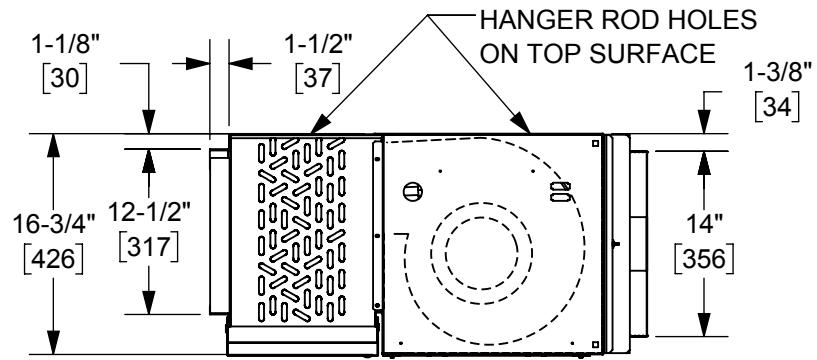
BOTTOM VIEW



TOP VIEW



FRONT VIEW



SIDE VIEW

DIMENSIONS

UNIT SIZE	A	B	C	D	E	F
06	32-3/8" [822]	24-3/4" [629]	23-1/8" [587]	20" [508]	14" [356]	16" [406]
08	37-3/8" [949]	29-3/4" [756]	28-1/8" [714]	25" [635]	19" [483]	20" [508]
10	41-3/8" [1050]	33-3/4" [858]	32-1/8" [816]	29" [737]	23" [584]	25" [635]
12	46-3/8" [1177]	38-3/4" [985]	37-1/8" [943]	34" [864]	28" [711]	32" [813]
14	51-3/8" [1304]	43-3/4" [1112]	42-1/8" [1070]	39" [991]	33" [838]	36" [915]
16	56-3/8" [1431]	48-3/4" [1239]	47-1/8" [1197]	44" [1118]	38" [965]	40" [1016]
18	61-3/8" [1558]	53-3/4" [1366]	52-1/8" [1324]	49" [1245]	43" [1092]	45" [1143]
20	65-3/8" [1660]	57-3/4" [1467]	56-1/8" [1426]	53" [1346]	47" [1194]	50" [1270]

NOTES:

1. All dimensions in Inches [millimeters]. All dimensions ±1/4" [6mm]. Metric values are soft conversion.
2. Right hand unit shown, Left hand unit opposite.
3. Same side control enclosure shown mounted on unit same side as cooling coil connections and includes (4) knockouts on (2) sides. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.

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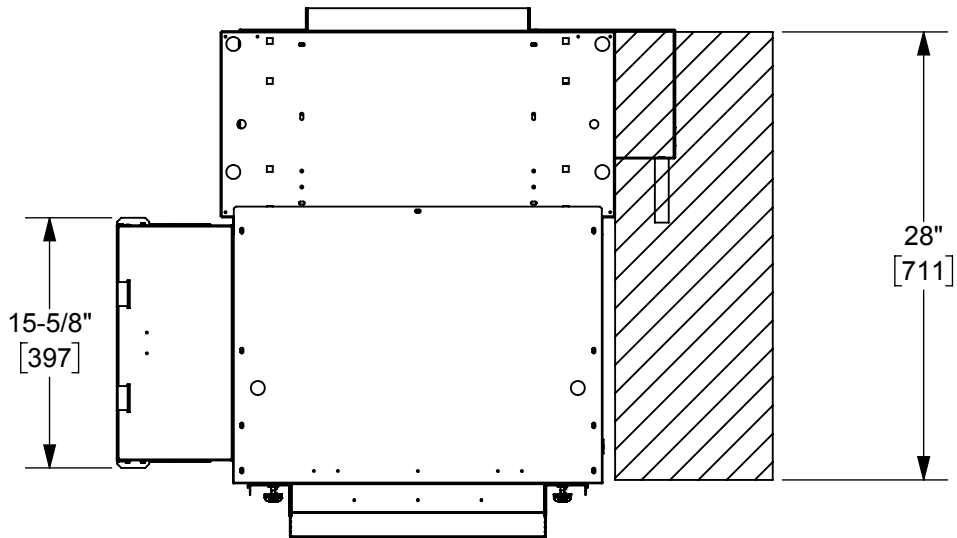
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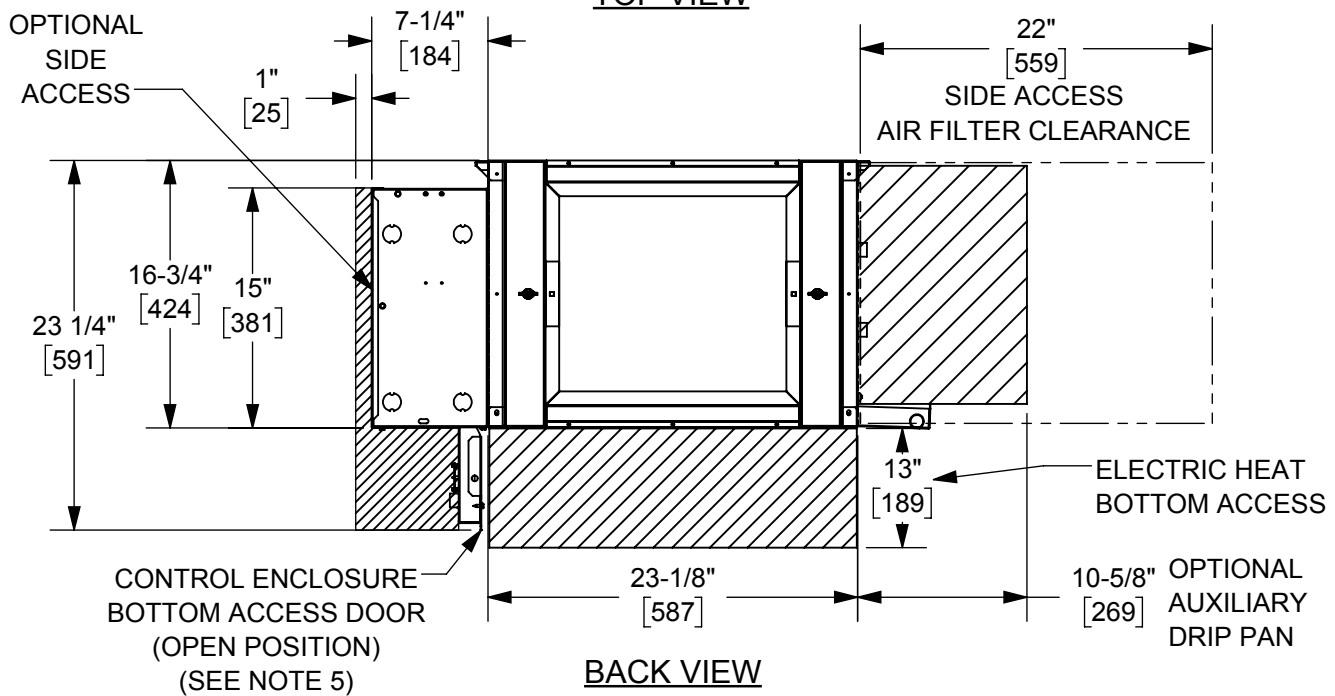
TITLE: **MODEL HPP 2-PIPE OR 4-PIPE W/O ELECTRIC HEAT**

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DATE	SHEET	DRAWING NO	REV
4/15/2020	PAGE 2 OF 2	82-80036	B



TOP VIEW



BACK VIEW
RH UNIT SHOWN
LH OPPOSITE

NOTES:

1. All chilled water piping that projects beyond the condensate pan or the optional auxiliary drip pan must be field insulated by others.
2. Optional Auxiliary Drip Pan (not shown) is mounted on the outlet side of the drain pan.
3. Drain pan is installed with the outlet tube(s) on cooling coil connection end of coil on 4-pipe units with optional opposite end connection.
4. Dimensions shown on this drawing apply to standard CW and HW valve packages. Refer to the Piping Package Catalog for valve package code details. Contact factory for details on valve packages using non-standard or customer furnished components.
5. Provide sufficient clearance to access electrical components and comply with all applicable codes and ordinances.

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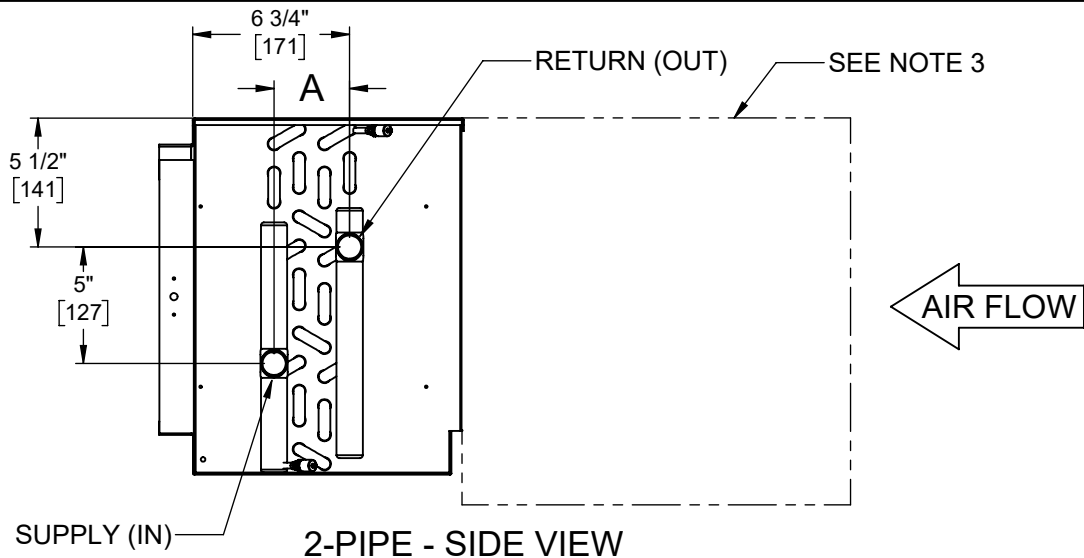
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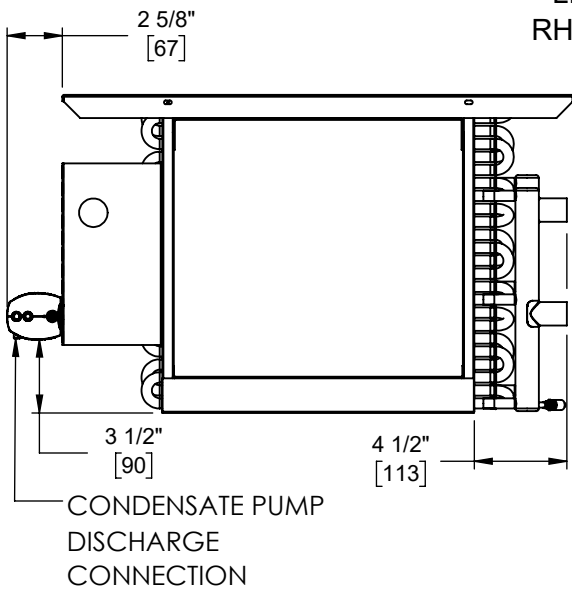
TITLE: **MODEL HPP**
EXTERNAL SPACE FEATURE REQUIREMENTS

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10/07/19	PAGE 1 OF 1	82-80043	A



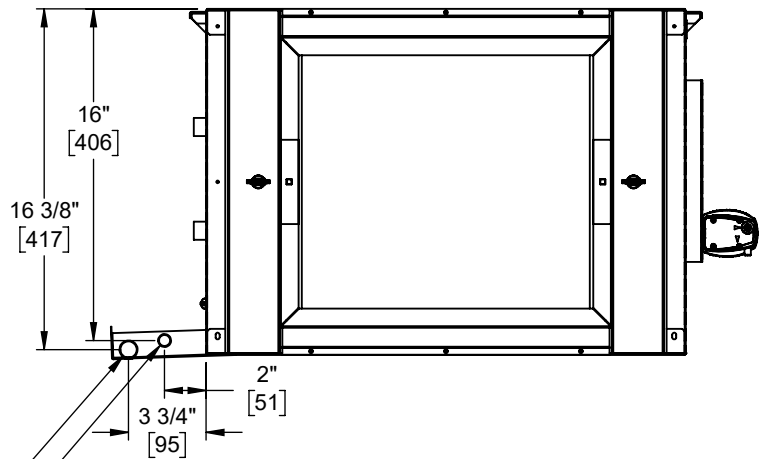
2-PIPE - SIDE VIEW

LH SHOWN
RH OPPOSITE



2-PIPE - FRONT VIEW

LH SHOWN
RH OPPOSITE



DRAIN LOCATIONS - BACK VIEW

LH SHOWN
RH OPPOSITE

AUX DRAIN OUTLET
(SEE NOTE 6)

MAIN DRAIN OUTLET
(SEE NOTE 5)

Unit Type	Coil Rows	A (1/2" ϕ Coil)	A (3/8" ϕ Coil)
2 Pipe Heating	1	1-1/8" [29] \triangle	7/8" [22] \triangle
	2	1-1/8" [29]	7/8" [22]
	3	2-1/8" [54]	1-3/4" [44]
	4	3-1/4" [83]	2-5/8" [67]
2 Pipe Cooling	3	2-1/8" [54]	1-3/4" [44]
	4	3-1/4" [83]	2-5/8" [67]
	6	5-3/8" [137]	4-3/8" [86]

NOTES:

- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
- All drawings subject to change without notice.
- Model "HPP" unit shown, typical for model "HPF" units.
Connections shown are internal on "HPE" units.
- Connection Size: See 82-80053 Coil Connections.
- Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet.
Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
- Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
- Single Row/Single Circuit headers are vertical
(Horizontal Distance is 0")

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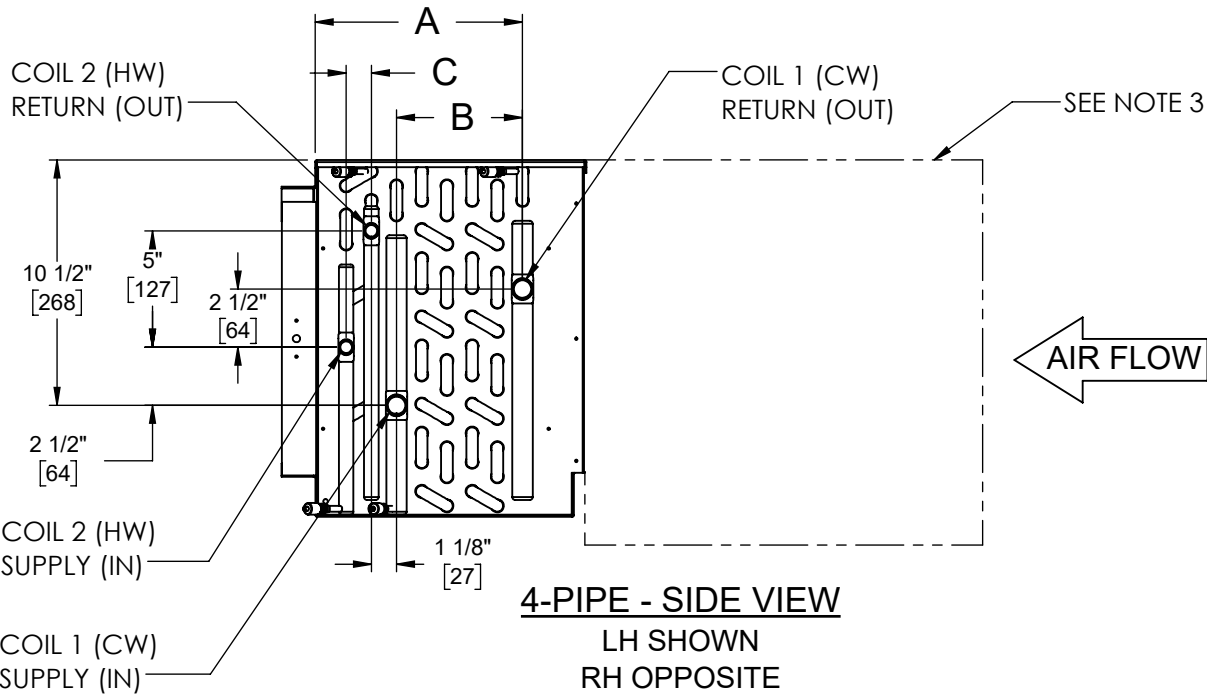
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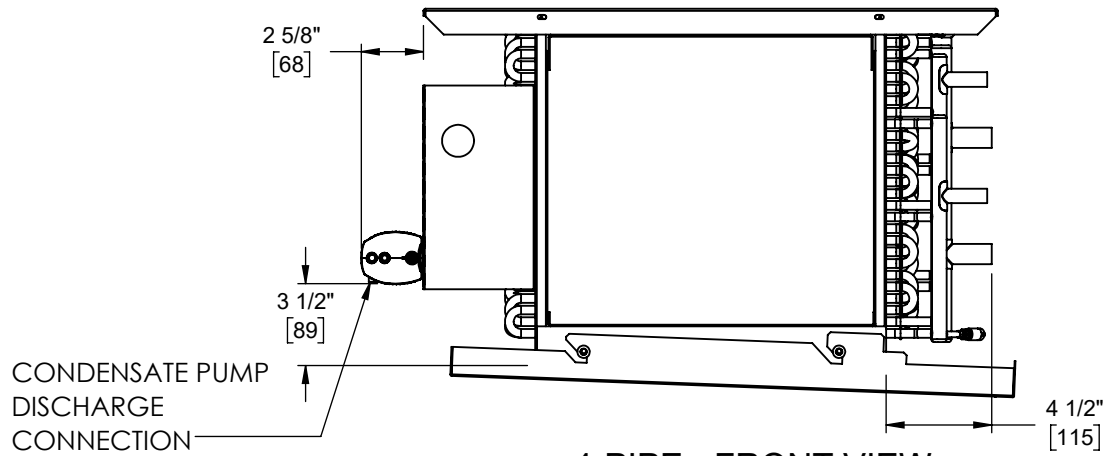
TITLE: **FIELD CONNECTIONS HPP/HPF**

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DATE	SHEET	DRAWING NO	REV
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4-PIPE - SIDE VIEW
LH SHOWN
RH OPPOSITE



4-PIPE - FRONT VIEW
LH SHOWN
RH OPPOSITE

Unit Type: 4 Pipe Re-Heat

Coil 1 CW Rows	Coil 2 HW Rows	1/2" Coil ϕ		
		A	B	C
3	1	6-3/4" [171]	1-5/8" [143]	1-1/4" [32] \triangle 7
3	2	6-3/4" [171]	1-7/8" [48]	1-1/8" [29]
3	3	6-3/4" [171]	2" [51]	2-1/4" [57]
4	1	6-3/4" [171]	3" [76]	1-1/4" [32] \triangle 7
4	2	6-3/4" [171]	3" [76]	1-1/8" [29]
3	4	8-7/8" [225]	2" [51]	3-1/4" [83]
4	3	8-7/8" [225]	3-1/4" [83]	2" [51]
4	4	8-7/8" [225]	3-1/4" [83]	3-1/4" [83]
6	1	8-7/8" [225]	5" [127]	1-1/8" [29] \triangle 7
6	2	8-7/8" [225]	5-1/4" [133]	1-1/8" [29]

NOTES:

- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
- All drawings subject to change without notice.
- Model "HPP" unit shown, typical for model "HPF" units.
Connections shown are internal on "HPE" units.
- Connection Size: See 82-80053 Coil Connections.
- Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet.
Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
- Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
- Single Row/Single Circuit headers are vertical
(Horizontal Distance is 0")

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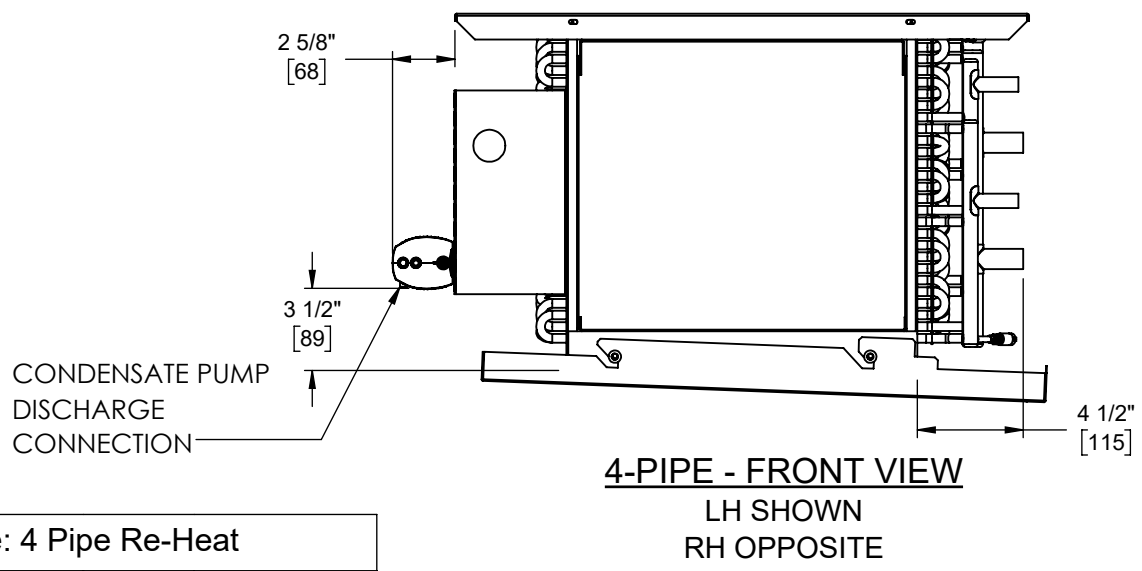
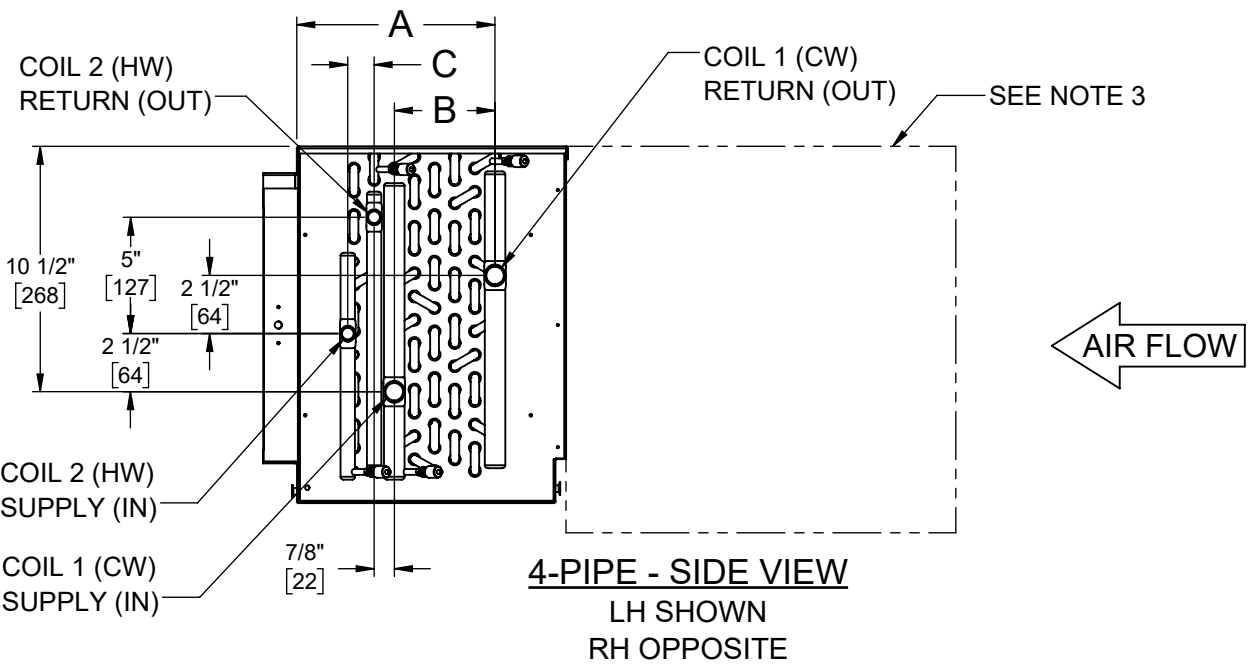
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TITLE: **FIELD CONNECTION HPP/HPF**

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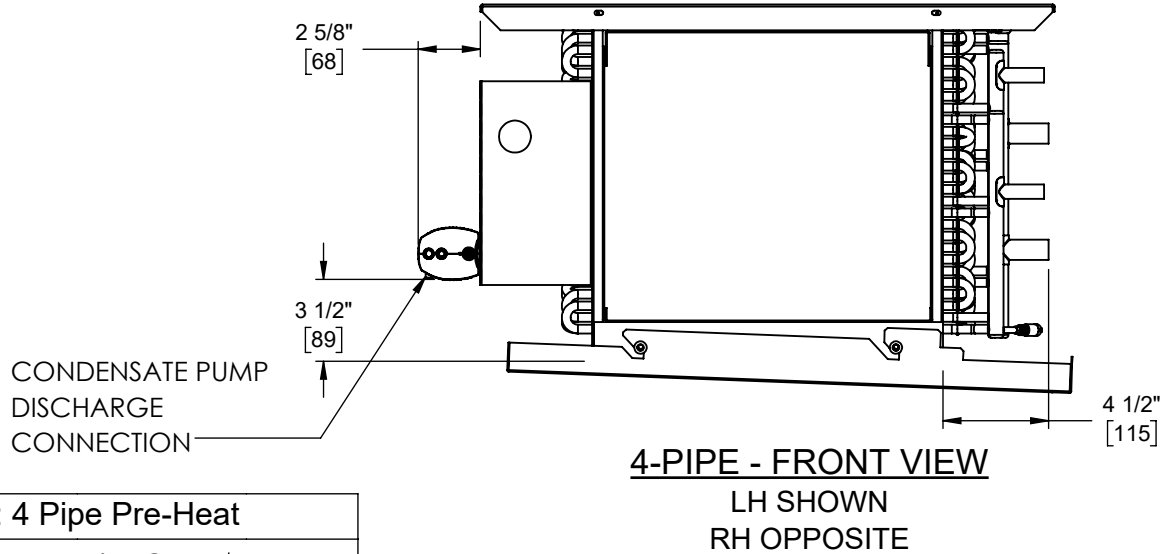
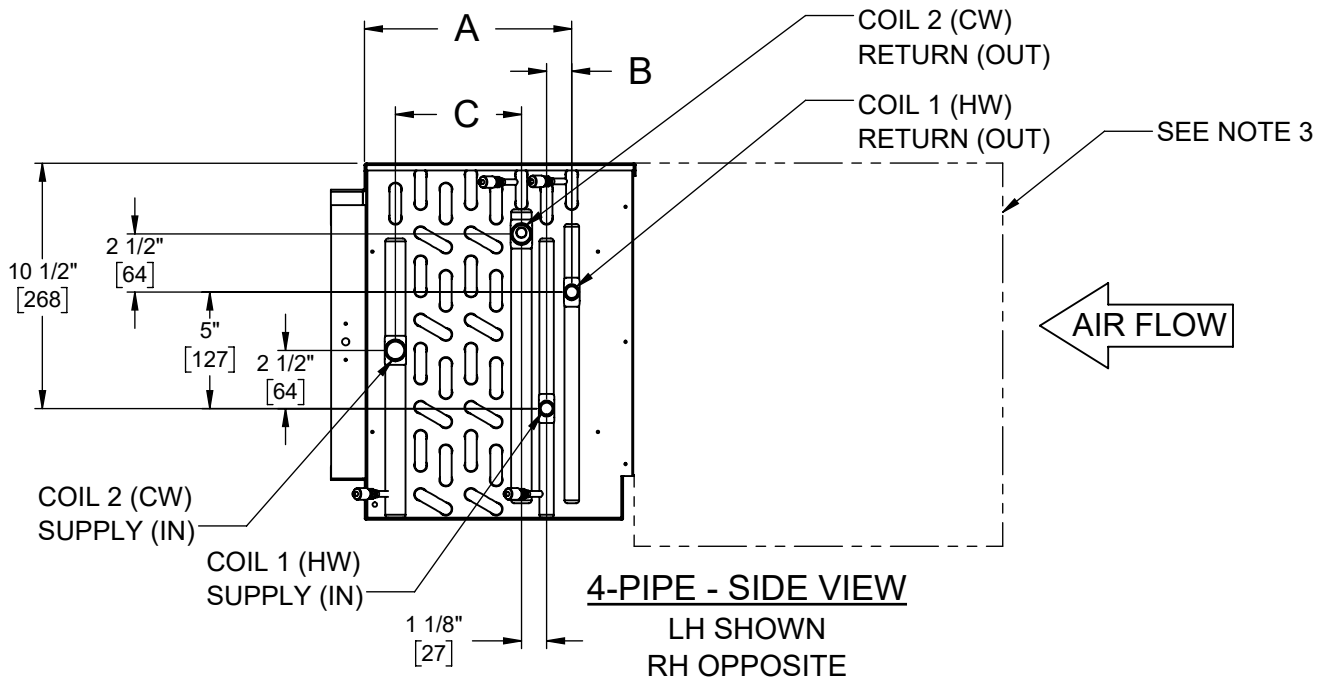


Unit Type: 4 Pipe Re-Heat				
Coil 1 CW Rows	Coil 2 HW Rows	3/8" Coil ϕ		
		A	B	C
3	1	6-3/4" [171]	1-1/2" [38]	1" [25] \triangle
3	2	6-3/4" [171]	1-3/8" [35]	1" [25]
3	3	6-3/4" [171]	1-3/4" [44]	1-1/2" [38]
4	1	6-3/4" [171]	1-3/4" [44]	1" [25] \triangle
4	2	6-3/4" [171]	2-1/4" [57]	1" [25]
3	4	8-1/2" [216]	1-1/2" [38]	2-5/8" [67]
4	3	8-1/2" [216]	2-5/8" [67]	1-1/2" [38]
4	4	8-1/2" [216]	2-5/8" [67]	2-1/4" [57]
6	1	8-1/2" [216]	3-1/2" [89]	1" [25] \triangle
6	2	8-1/2" [216]	4" [102]	1" [25]

- NOTES:**
- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
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 - Model "HPP" unit shown, typical for model "HPF" units.
Connections shown are internal on "HPE" units.
 - Connection Size: See 82-80053 Coil Connections.
 - Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet.
Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
 - Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
 - Single Row/Single Circuit headers are vertical
(Horizontal Distance is 0")

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	<p>DO NOT SCALE DRAWING DIMENSIONS ARE IN INCH (MM) FORMAT +/- 1/8 [3] UNLESS OTHERWISE NOTED</p>	<p>DATE 3/24/22</p>	<p>SHEET PAGE 3 OF 5</p>	<p>DRAWING NO 82-80047</p>	<p>REV B</p>



Unit Type: 4 Pipe Pre-Heat

Coil 1 HW Rows	Coil 2 CW Rows	1/2" Coil ϕ		
		A	B	C
1	3	7-5/8" [194]	1-1/8" [29] \triangle	1-5/8" [41]
1	4	7-5/8" [194]	1-1/8" [29] \triangle	2-1/2" [64]
2	3	6-3/4" [171]	1-1/8" [29]	2-1/8" [54]
2	4	6-3/4" [171]	1-1/8" [29]	3-1/8" [79]
3	3	6-3/4" [171]	2-1/8" [54]	2" [51]
1	6	9-5/8" [244]	1-1/8" [29] \triangle	4-3/4" [121]
2	6	8-7/8" [225]	1-1/8" [29]	5-1/4" [133]
3	4	8-7/8" [225]	2-1/8" [54]	3-1/8" [79]
4	3	8-7/8" [225]	3-1/4" [83]	2-1/8" [54]
4	4	8-7/8" [225]	3-1/4" [83]	3-1/8" [79]

NOTES:

- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
- All drawings subject to change without notice.
- Model "HPP" unit shown, typical for model "HPF" units.
Connections shown are internal on "HPE" units.
- Connection Size: See 82-80053 Coil Connections.
- Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet.
Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
- Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
- Single Row/Single Circuit headers are vertical
(Horizontal Distance is 0")

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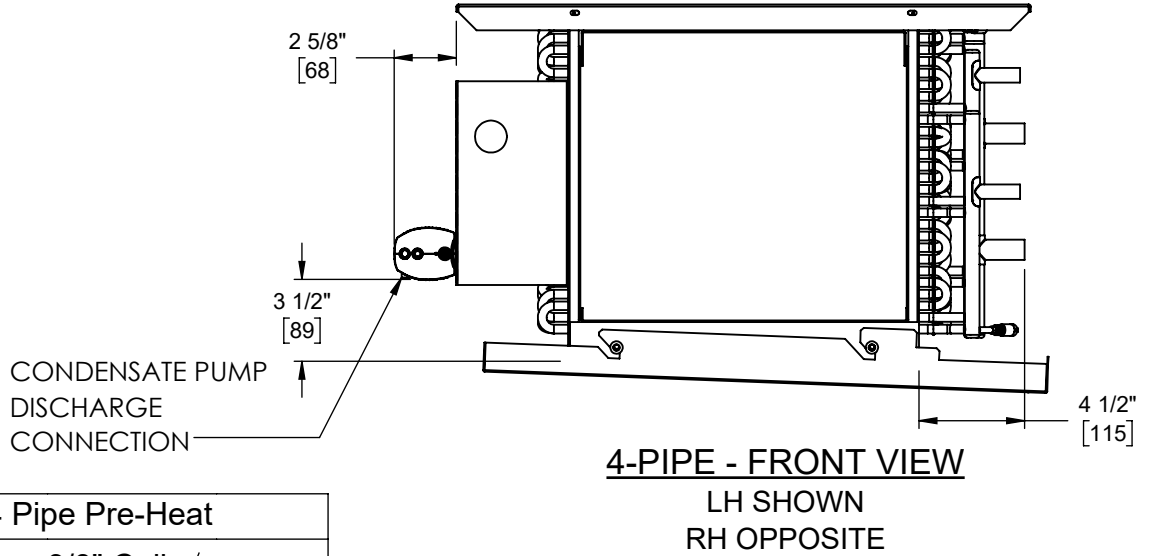
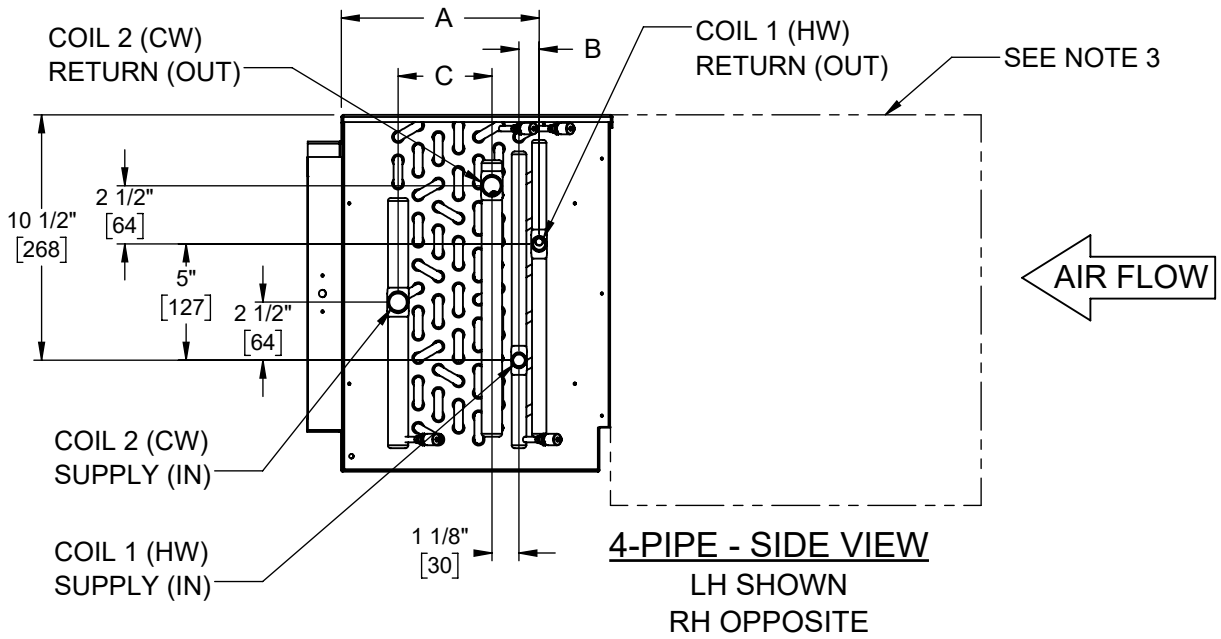
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SUBMITTAL DRAWING
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TITLE: **FIELD CONNECTIONS HPP/HPF**

DO NOT SCALE DRAWING
DIMENSIONS ARE IN INCH (MM) FORMAT
+/- 1/8 (3) UNLESS OTHERWISE NOTED

DATE	SHEET	DRAWING NO	REV
03/24/22	PAGE 4 OF 5	82-80047	B



Unit Type: 4 Pipe Pre-Heat

Coil 1 HW Rows	Coil 2 CW Rows	3/8" Coil ϕ		
		A	B	C
1	3	7-1/2" [191]	1" [25] \triangle	1-1/2" [38]
1	4	7-1/2" [191]	1" [25] \triangle	1-3/4" [44]
2	3	6-3/4" [171]	1" [25]	1-1/2" [38]
2	4	6-3/4" [171]	1" [25]	2" [51]
3	3	6-3/4" [171]	1-3/4" [XX]	1-1/2" [38]
1	6	9-1/4" [235]	1" [25] \triangle	3-1/2" [89]
2	6	8-1/2" [216]	1" [25]	3-3/4" [95]
3	4	8-1/2" [216]	1-3/4" [44]	2-1/4" [57]
4	3	8-1/2" [216]	2-5/8" [67]	1-1/2" [38]
4	4	8-1/2" [216]	2-5/8" [67]	2-1/4" [57]

NOTES:

- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
- All drawings subject to change without notice.
- Model "HPP" unit shown, typical for model "HPF" units.
Connections shown are internal on "HPE" units.
- Connection Size: See 82-80053 Coil Connections.
- Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet.
Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
- Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
- Single Row/Single Circuit headers are vertical
(Horizontal Distance is 0")

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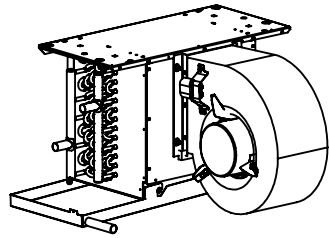
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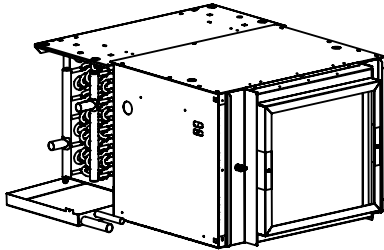
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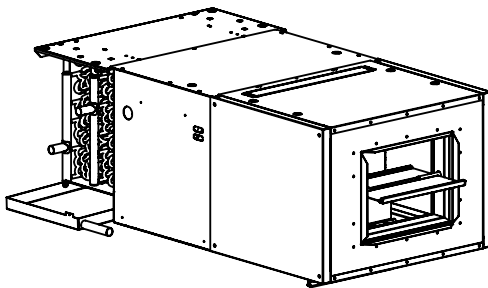
DATE	SHEET	DRAWING NO	REV
3/24/22	PAGE 5 OF 5	82-80047	B



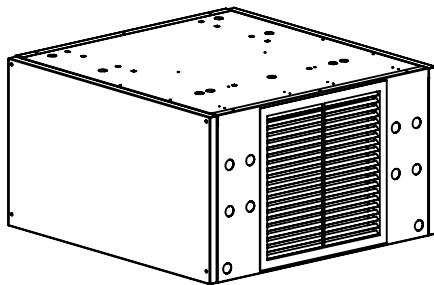
MODEL HPF
HIGH PERFORMANCE
FREE RETURN FAN COIL UNIT



MODEL HPP
HIGH PERFORMANCE
PLENUM RETURN FAN COIL UNIT



MODEL HPP
HIGH PERFORMANCE
PLENUM RETURN FAN COIL UNIT
W/ MIXING BOX



MODEL HPE
HIGH PERFORMANCE
EXPOSED CABINET FAN COIL UNIT

NOTES:

1. Table applies to 1/2" and 3/8" tube diameters.
2. Number of circuits does not affect Coil connection size.

WATER & DX COIL CONNECTION SIZES			
UNIT SIZE	TYPE	# ROWS	CONN. SIZE (OD)
06	HW	1	5/8
06	HW	2	5/8
06	HW	3	7/8
06	HW	4	7/8
06	CW OR DX	3	7/8
06	CW OR DX	4	7/8
06	CW OR DX	6	7/8
08	HW	1	5/8
08	HW	2	5/8
08	HW	3	7/8
08	HW	4	7/8
08	CW OR DX	3	7/8
08	CW OR DX	4	7/8
08	CW OR DX	6	7/8
10	HW	1	5/8
10	HW	2	5/8
10	HW	3	7/8
10	HW	4	7/8
10	CW OR DX	3	7/8
10	CW OR DX	4	7/8
10	CW OR DX	6	7/8
12	HW	1	5/8
12	HW	2	5/8
12	HW	3	7/8
12	HW	4	7/8
12	CW OR DX	3	7/8
12	CW OR DX	4	7/8
12	CW OR DX	6	7/8
14	HW	1	7/8
14	HW	2	7/8
14	HW	3	1 1/8
14	HW	4	1 1/8
14	CW OR DX	3	1 1/8
14	CW OR DX	4	1 1/8
14	CW OR DX	6	1 1/8
16	HW	1	7/8
16	HW	2	7/8
16	HW	3	1 1/8
16	HW	4	1 1/8
16	CW OR DX	3	1 1/8
16	CW OR DX	4	1 1/8
16	CW OR DX	6	1 1/8
18	HW	1	7/8
18	HW	2	7/8
18	HW	3	1 1/8
18	HW	4	1 1/8
18	CW OR DX	3	1 1/8
18	CW OR DX	4	1 1/8
18	CW OR DX	6	1 1/8
20	HW	1	7/8
20	HW	2	7/8
20	HW	3	1 1/8
20	HW	4	1 1/8
20	CW OR DX	3	1 1/8
20	CW OR DX	4	1 1/8
20	CW OR DX	6	1 1/8

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TITLE:

COIL CONNECTIONS HPE/HPF/HPP

DATE

10/08/19

SHEET

PAGE 1 OF 1

DRAWING NO

82-80053

REV

A



Project Name: CALS Main Library Renovation ETI Contract No: Contract #
 Location: Coil Version: 7.05b
 Consultant/Engineer: Printed Date: 5/8/2024 12:54:16 PM
 Contractor: Selection Date: 2/29/2024 9:49:35 AM
 Sold To: Last Revision Date: 2/29/2024 9:48:22 AM
 P.O. No: PO

Performance Data Sheet

Unit Tag FCU-B-01, FCU-B-02	Qty 2	Model HLE-D06	Air Flow 300 CFM	Total Duty - Btuh	Sensible Duty 16,140 Btuh
--------------------------------	----------	------------------	---------------------	----------------------	------------------------------

Unit Data

Model Size : 06	(Fans) Speed : (2) High	Filter	: 1" Throwaway	Coil Tube Dia. [in.]	3/8
Type : Horizontal Low Profile - Series D	(Motors) HP : (1) 1/4	Filter (Qty) Size	: 31 x 9.25 x 1	Coil Face Area [ft²]	1.72
	Motor FLA : 3.1	Filter Face Area	[ft²] 1.99	Weight* [lb]	121
	Motor Type : ECM 3 SPD				
	Capacity : High Capacity				

Output Data

Altitude [Ft.]	0
Air Flow Rate [CFM]	300
ESP [in.wg]	0.39

Chilled Water Coil Data

EAT DB/WB [°F]	80.0/ 67.0
LAT DB/WB [°F]	57.9/ 56.3
Total Capacity [Btuh]	9,940
Sensible Capacity [Btuh]	7,290
EWT/LWT [°F]	45.0/ 56.5
Fluid Flow [gpm]	1.80
Fluid P.D [ft.wg]	1.76
Fluid Velocity [fps]	1.80
Rows / FPI / Circuits	3 Row / 12 FPI / 3 Ckt
Coil Connection Size: [in.]	0.875

Hot Water Coil (Pre-Heat) Data

EAT DB [°F]	70.0
LAT DB [°F]	118.3
Sensible Capacity [Btuh]	16,140
EWT/LWT [°F]	180.0/ 133.9
Fluid Flow [gpm]	0.70
Fluid P.D [ft.wg]	1.76
Fluid Velocity [fps]	2.10
Rows / FPI / Circuits	1 Row / 12 FPI / 1 Ckt
Coil Connection Size: [in.]	0.625

Options

- Access Latches- Standard
- Auxiliary Drip Pan- Galvanized Auxiliary Drip Pan
- BC02 24V, Unit S/S Relay / Fan Op. Relay & Transformer
- Discharge Air Sensor- OC026
- Elastomeric Closed Cell Foam Insulation
- Enclosure Mount- Unit Mounted
- Galvanized Drain pan
- Motor Control- 3 Speed Fixed
- OC011 Drain Pan Float Switch
- OC012 Toggle Disconnect Switch - 15 amps
- Paint Options- Pearl White Satin
- Return Air Options- Return: Bottom Stamped Louver Grille
- Supply Air Options- Supply: Stamped Louver Grille
- Thermostat Location- Remote Mounted Thermostat
- Thermostat- P11 Digital Programmable - 4 Pipe Heat/Cool - A/C
- Vibration Isolation
- Hot Water Coil: Piping Package Size - 1/2"
- Hot Water Coil:2 Position Close-Off (24v Only)
- Hot Water Coil:2-Way Control Valve
- Hot Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Hot Water Coil:Factory Mounted Piping Package
- Hot Water Coil:Galvanized Casing
- Hot Water Coil:Left Hand Connection
- Hot Water Coil:Manual Air Vent
- Hot Water Coil:P/T Ports
- Hot Water Coil:Package Code- Code: 24 (Manual Ball Valve with Memory Stop)
- Hot Water Coil:Unions
- Hot Water Coil:Y-Strainer- Y-Strainer with Blowdown
- Chilled Water Coil: Piping Package Size - 1/2"
- Chilled Water Coil:2 Position Close-Off (24v Only)
- Chilled Water Coil:2-Way Control Valve
- Chilled Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Chilled Water Coil:Factory Mounted Piping Package
- Chilled Water Coil:Galvanized Casing
- Chilled Water Coil:Left Hand Connection
- Chilled Water Coil:Manual Air Vent
- Chilled Water Coil:P/T Ports
- Chilled Water Coil:Package Code- Code: 24 (Manual Ball Valve with Memory Stop)
- Chilled Water Coil:Unions
- Chilled Water Coil:Y-Strainer- Y-Strainer with Blowdown

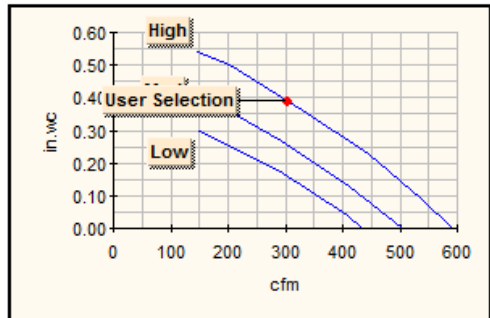
Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#
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Electrical Data		
	[V/P/HZ]	
Motor Voltage		115/1/60 ECM 3 SPD
Total Full Load Amps	:	3.10
MCA / MSCP	:	3.88 / 15.00
Fan Power Input	[Watts@CFM]	70.00

Sound Data at High Fan Speed							
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Total	62	67	64	62	58	54	48



- * Unit weight includes unit with wet coil(s) as selected.
 - Does not include accessories
- Unit pressure drop and air flow based upon dry coil as required by AHRI-440.
- Sound data tested in accordance with AHRI-350-2015
- Total sound power level data based on Horizontal Ceiling Exposed Cabinet FCU Model with fan air flow at corresponding motor tap with 115/1/60 volt ECM 3 SPD motor, 4 row coil, 1" throwaway filter, unit standard insulation, 0.00 in.wg external static pressure and standard rated internal pressure losses.
- Scheduled motor information is for Fan Input Power at High Speed.
- For 0' altitude the coil selection has been made at Standard Conditions.





Project Name: CALS Main Library Renovation ETI Contract No: Contract #
 Location: Coil Version: 7.05b
 Consultant/Engineer: Printed Date: 5/8/2024 12:54:16 PM
 Contractor: Selection Date: 2/29/2024 9:51:27 AM
 Sold To: Last Revision Date: 2/29/2024 9:50:12 AM
 P.O. No: PO

Performance Data Sheet

Unit Tag FCU-B-03	Qty 1	Model HLE-D09	Air Flow 460 CFM	Total Duty - Btuh	Sensible Duty 20,771 Btuh
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Unit Data

Model Size : 09	(Fans) Speed : (2) High	Filter	: 1" Throwaway	Coil Tube Dia.	[in.] 1/2
Type : Horizontal Low Profile - Series D	(Motors) HP : (1) 1/4	Filter (Qty) Size	: (1) 20, (1) 22.5 x 9.25 x 1	Tube Wall	[in.] 0.025
	Motor FLA : 4.5	Filter Face Area	[ft²] 2.73	Coil Face Area	[ft²] 2.20
	Motor Type : ECM 3 SPD			Weight*	[lb] 168
	Capacity : High Capacity				

Output Data

Altitude	[Ft.]	0
Air Flow Rate	[CFM]	460
ESP	[in.wg]	0.38

Chilled Water Coil Data

EAT DB/WB	[°F]	80.0/ 67.0
LAT DB/WB	[°F]	61.0/ 58.8
Total Capacity	[Btuh]	12,089
Sensible Capacity	[Btuh]	9,729
EWT/LWT	[°F]	45.0/ 60.8
Fluid Flow	[gpm]	1.60
Fluid P.D	[ft.wg]	1.58
Fluid Velocity	[fps]	1.60
Rows / FPI / Circuits	:	3 Row / 12 FPI / 2 Ckt
Coil Connection Size:	[in.]	0.875

Hot Water Coil (Pre-Heat) Data

EAT DB	[°F]	70.0
LAT DB	[°F]	110.3
Sensible Capacity	[Btuh]	20,771
EWT/LWT	[°F]	180.0/ 142.3
Fluid Flow	[gpm]	1.10
Fluid P.D	[ft.wg]	1.40
Fluid Velocity	[fps]	2.20
Rows / FPI / Circuits	:	1 Row / 12 FPI / 1 Ckt
Coil Connection Size:	[in.]	0.625

Options

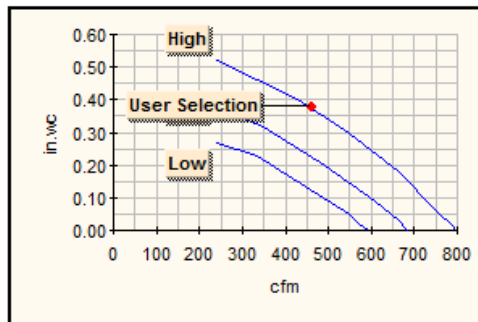
- Access Latches- Standard
- Auxiliary Drip Pan- Galvanized Auxiliary Drip Pan
- BC02 24V, Unit S/S Relay / Fan Op. Relay & Transformer
- Discharge Air Sensor- OC026
- Elastomeric Closed Cell Foam Insulation
- Enclosure Mount- Unit Mounted
- Galvanized Drain pan
- Motor Control- 3 Speed Fixed
- OC011 Drain Pan Float Switch
- OC012 Toggle Disconnect Switch - 15 amps
- Paint Options- Pearl White Satin
- Return Air Options- Return: Bottom Stamped Louver Grille
- Supply Air Options- Supply: Stamped Louver Grille
- Thermostat Location- Remote Mounted Thermostat
- Thermostat- P11 Digital Programmable - 4 Pipe Heat/Cool - A/C
- Vibration Isolation
- Hot Water Coil: Piping Package Size - 1/2"
- Hot Water Coil:2 Position Close-Off (24v Only)
- Hot Water Coil:2-Way Control Valve
- Hot Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Hot Water Coil:Factory Mounted Piping Package
- Hot Water Coil:Galvanized Casing
- Hot Water Coil:Left Hand Connection
- Hot Water Coil:Manual Air Vent
- Hot Water Coil:P/T Ports
- Hot Water Coil:Package Code- Code: 24 (Manual Ball Valve with Memory Stop)
- Hot Water Coil:Unions
- Hot Water Coil:Y-Strainer- Y-Strainer with Blowdown
- Chilled Water Coil: Piping Package Size - 1/2"
- Chilled Water Coil:2 Position Close-Off (24v Only)
- Chilled Water Coil:2-Way Control Valve
- Chilled Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Chilled Water Coil:Factory Mounted Piping Package
- Chilled Water Coil:Galvanized Casing
- Chilled Water Coil:Left Hand Connection
- Chilled Water Coil:Manual Air Vent
- Chilled Water Coil:P/T Ports
- Chilled Water Coil:Package Code- Code: 24 (Manual Ball Valve with Memory Stop)
- Chilled Water Coil:Unions
- Chilled Water Coil:Y-Strainer- Y-Strainer with Blowdown

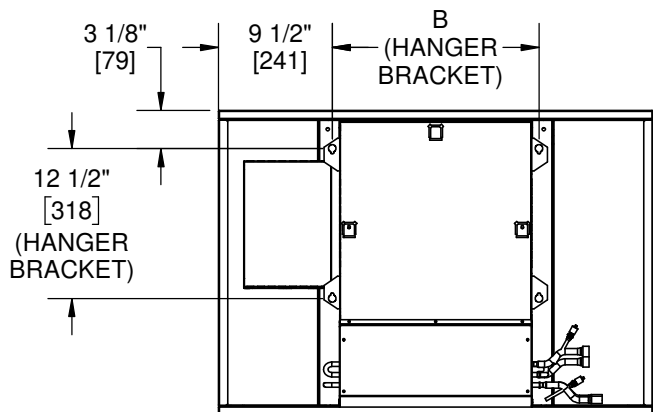
Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#
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Electrical Data		
Motor Voltage	[V/P/HZ]	115/1/60 ECM 3 SPD
Total Full Load Amps	:	4.50
MCA / MSCP	:	5.63 / 15.00
Fan Power Input	[Watts@CFM]	92.00

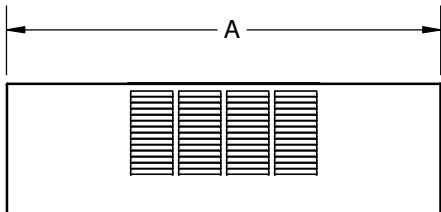
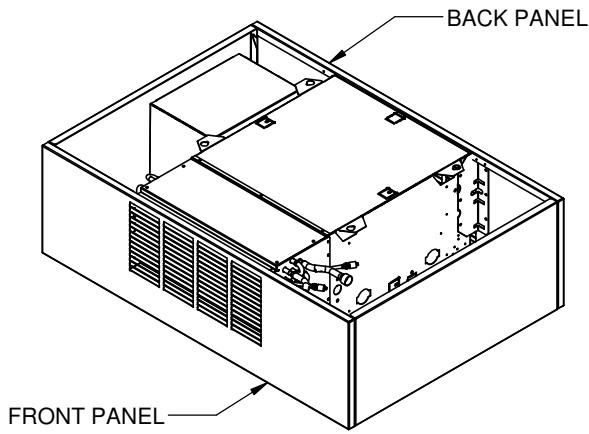
Sound Data at High Fan Speed							
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Total	65	70	65	63	59	55	49

- * Unit weight includes unit with wet coil(s) as selected.
 - o Does not include accessories
- Unit pressure drop and air flow based upon dry coil as required by AHRI-440.
- Sound data tested in accordance with AHRI-350-2015
- Total sound power level data based on Horizontal Ceiling Exposed Cabinet FCU Model with fan air flow at corresponding motor tap with 115/1/60 volt ECM 3 SPD motor, 4 row coil, 1" throwaway filter, unit standard insulation, 0.00 in.wg external static pressure and standard rated internal pressure losses.
- Scheduled motor information is for Fan Input Power at High Speed.
- For 0' altitude the coil selection has been made at Standard Conditions.

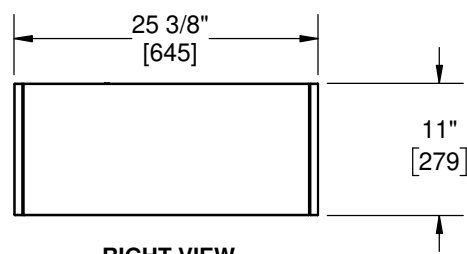




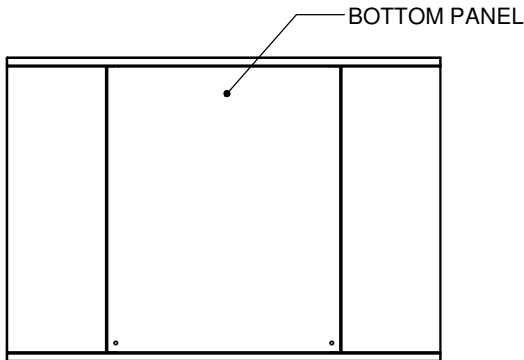
TOP VIEW



FRONT VIEW



RIGHT VIEW



BOTTOM VIEW

DIMENSIONS		
UNIT SIZE	A	B
02	36 1/4" [921]	17 1/4" [438]
03	39 1/2" [1003]	20 1/2" [521]
04	44 1/2" [1130]	25 1/2" [648]
06	51 1/4" [1302]	32 1/4" [819]
08	58 1/4" [1480]	39 1/4" [997]
09	62 1/2" [1588]	43 1/2" [1105]
10	72 1/4" [1835]	53 1/4" [1353]
12	80 1/4" [2038]	61 1/4" [1556]

NOTES:

1. All dimensions are inches [millimeters]. All dimensions ±1/4"[6mm]. Metric values are soft conversions.
2. Left hand unit shown, right hand unit opposite.
3. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Drain piping should be routed through casing opening indicated to provide proper slope.
5. Bottom panel removable for access to filter and fan assembly.
6. Corner panels are removable to access electrical enclosure, coil and valve pack.
7. Internal insulation of field piping may be required.
8. Field piping casing penetrations must be cut in the field to match individual job requirements.
9. All dimensions also apply to units with Electric Heat Only.

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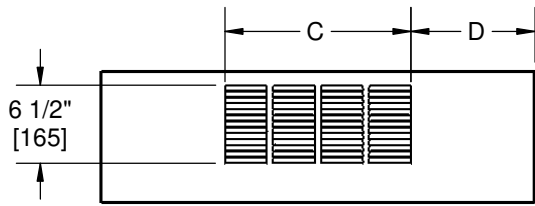
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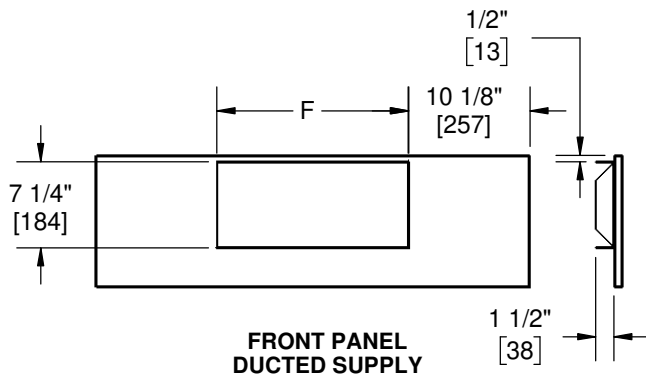
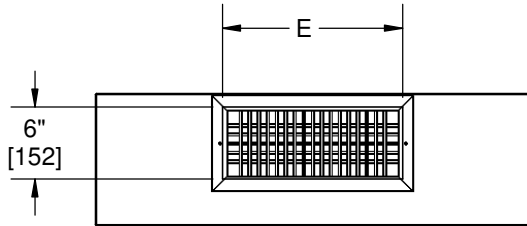
DO NOT SCALE DRAWING
DIMENSIONS ARE IN INCH [MM] FORMAT +/- 1/8 [3] UNLESS OTHERWISE NOTED

TITLE: **MODEL HLE EXPOSED FAN COIL UNIT SERIES D REAR RETURN**

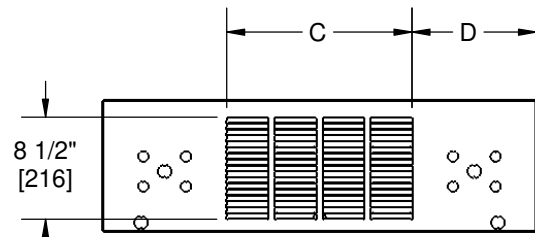
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10/4/19	PAGE 1 OF 2	47-80116	A



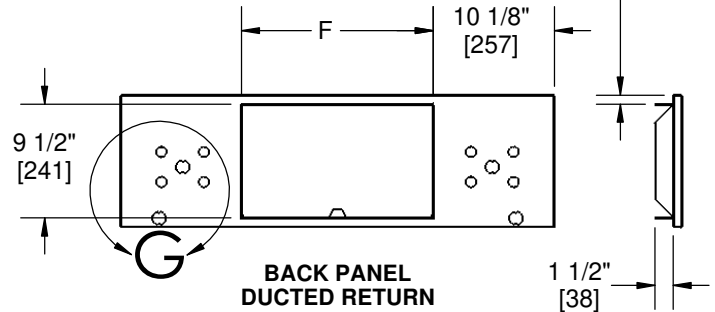
**FRONT PANEL
LOUVERED SUPPLY**



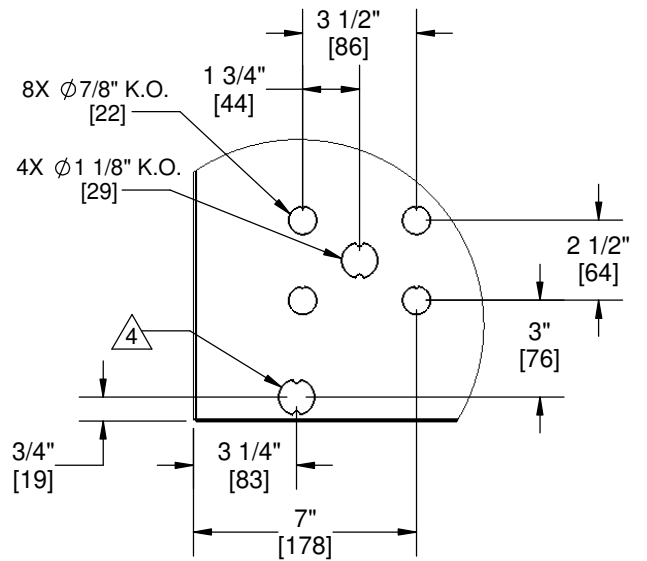
**FRONT PANEL
DUCTED SUPPLY**



**BACK PANEL
LOUVERED RETURN**



**BACK PANEL
DUCTED RETURN**



DETAIL G

DIMENSIONS

UNIT SIZE	C	D	E	F
02	15 1/2" [394]	10 3/8" [264]	15" [381]	16" [406]
03	15 1/2" [394]	12" [305]	18" [457]	19 1/4" [489]
04	23 1/2" [597]	10 1/2" [267]	23" [584]	24 1/4" [616]
06	27 1/2" [699]	11 7/8" [302]	30" [762]	31" [787]
08	35 1/2" [902]	11 3/8" [289]	37" [940]	38" [965]
09	39 1/2" [1003]	11 1/2" [292]	41" [1041]	42 1/4" [1073]
10	51 1/2" [1308]	10 3/8" [264]	23" [584]	52" [1321]
12	59 1/2" [1511]	10 3/8" [264]	27" [686]	60" [1524]

NOTES:

1. All dimensions are inches [millimeters]. All dimensions $\pm 1/4"$ [6mm]. Metric values are soft conversions.
2. Left hand unit shown, right hand unit opposite.
3. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Drain piping should be routed through casing opening indicated to provide proper slope.
5. Bottom panel removable for access to filter and fan assembly.
6. Corner panels are removable to access electrical enclosure, coil and valve pack.
7. Internal insulation of field piping may be required.
8. Field piping casing penetrations must be cut in the field to match individual job requirements.
9. All dimensions also apply to units with Electric Heat Only.

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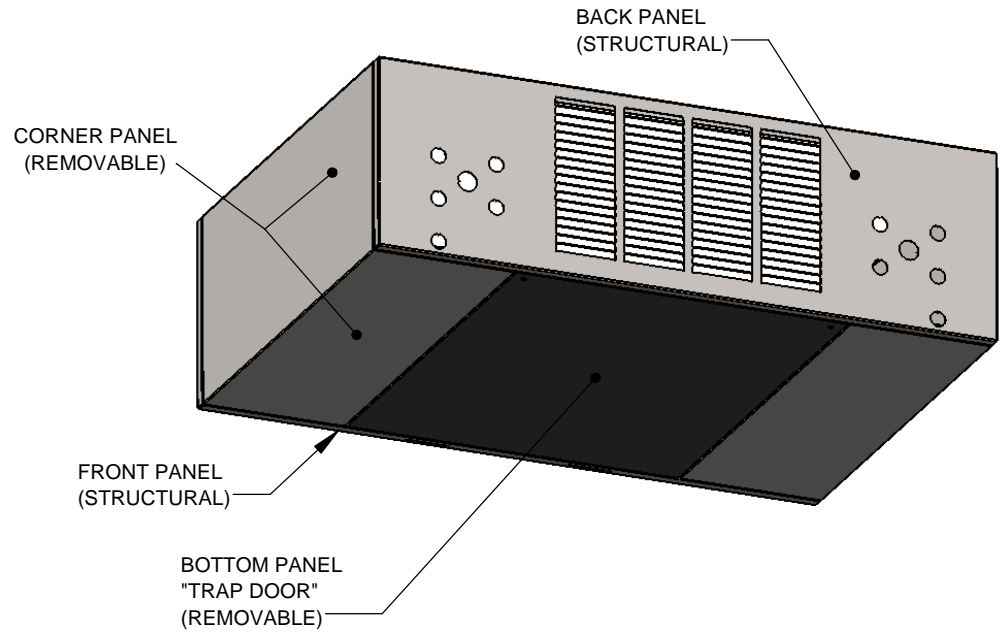
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TITLE: **MODEL HLE EXPOSED FAN COIL UNIT
SERIES D REAR RETURN**

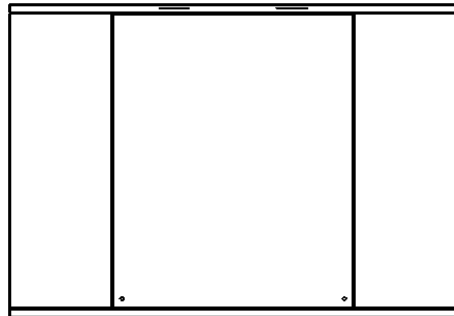
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10/4/19	PAGE 2 OF 2	47-80116	A



FRONT VIEW
TRAP DOOR OPENED 1" [25]



RIGHT VIEW
TRAP DOOR OPENED 1" [25]



BOTTOM VIEW
TRAP DOOR OPENED 1" [25]

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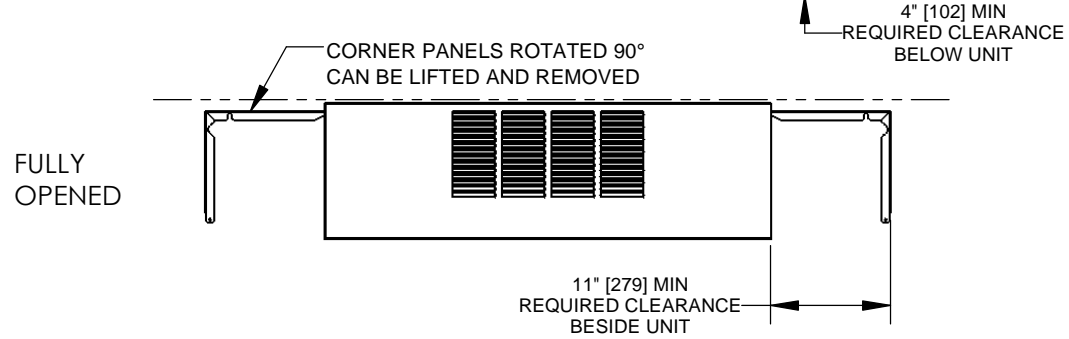
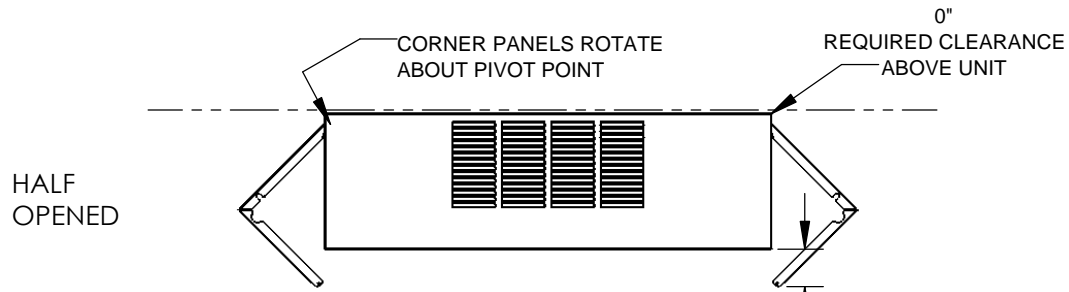
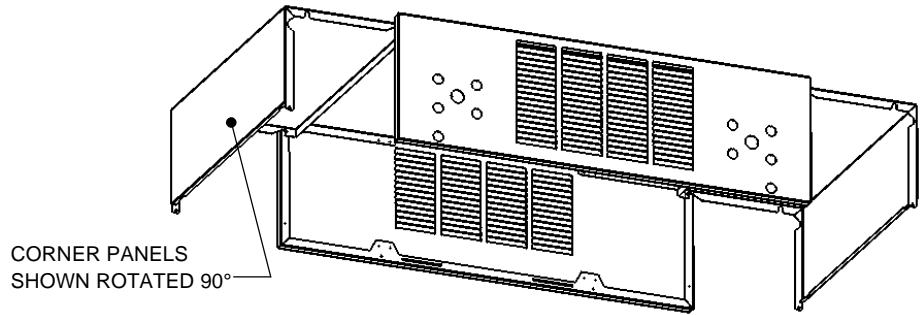
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TITLE:
**MODEL HLE EXPOSED FAN COIL UNIT
SERIES D SERVICE ENVELOPE**

DATE	SHEET	DRAWING NO	REV
4/7/16	PAGE 1 OF 4	47-80118	00

HEIGHT RESTRICTED APPLICATION



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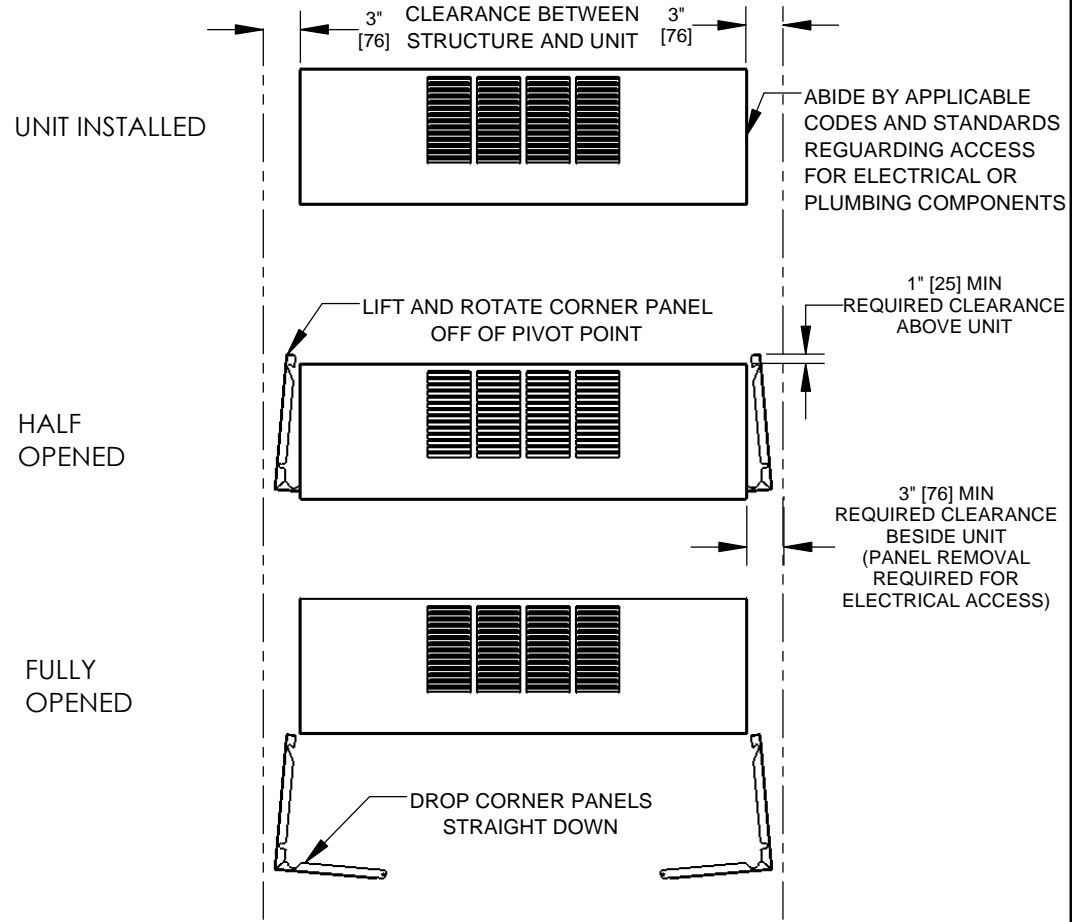
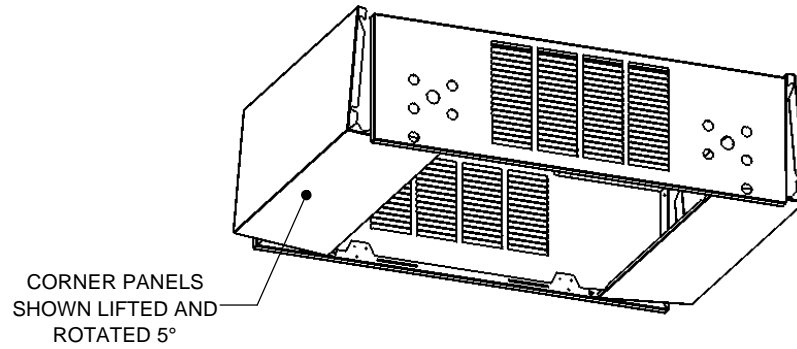
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TITLE: MODEL HLE EXPOSED FAN COIL UNIT
SERIES D SERVICE ENVELOPE

DATE	SHEET	DRAWING NO	REV
4/7/16	PAGE 2 OF 4	47-80118	00

WIDTH RESTRICTED APPLICATION



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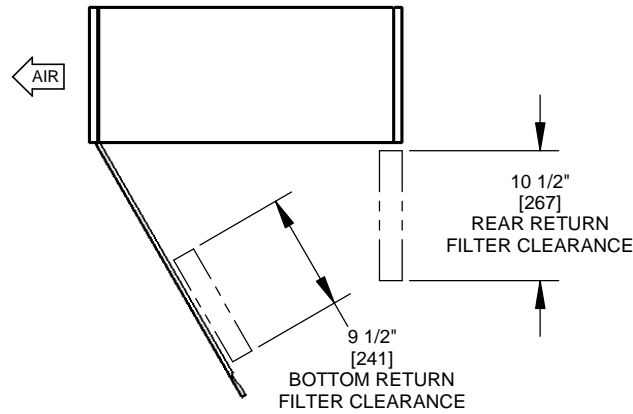
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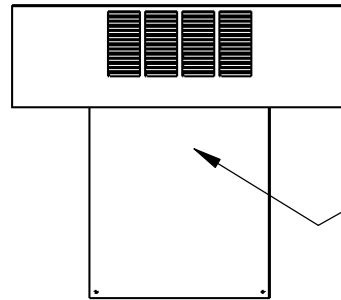
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TITLE: **MODEL HLE EXPOSED FAN COIL UNIT SERIES D SERVICE ENVELOPE**

DATE	SHEET	DRAWING NO	REV
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RIGHT VIEW
FILTER ACCESS DETAIL
TRAP DOOR OPENED



FRONT VIEW
ACCESS SEQUENCE
DETAIL 1

TRAP DOOR RETAINED BY 1/4 TURN HARDWARE
SWINGS OPEN ON INTEGRATED HINGE-FLANGE
OPEN TRAP DOOR TO ACCESS:

- AIR FILTER
- BLOWER ACCESS PANEL
- ELECTRIC HEAT ACCESS PANEL
- CORNER PANEL MOUNTING HARDWARE



FRONT VIEW
ACCESS SEQUENCE
DETAIL 2

AFTER OPENING TRAP DOOR
CORNER PANELS MAY BE REMOVED
EACH CORNER PANEL RETAINED BY QTY (2)
#10 HEX HEAD SCREWS

OPEN CORNER PANELS TO ACCESS:

- ELECTRICAL ENCLOSURE
- VALVE PACKAGE

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TITLE:
**MODEL HLE EXPOSED FAN COIL UNIT
SERIES D SERVICE ENVELOPE**

DATE	SHEET	DRAWING NO	REV
4/7/16	PAGE 4 OF 4	47-80118	00



Project Name: CALS Main Library Renovation ETI Contract No: Contract #
 Location: Coil Version: 7.05b
 Consultant/Engineer: Printed Date: 5/8/2024 12:54:16 PM
 Contractor: Selection Date: 2/29/2024 9:45:45 AM
 Sold To: Last Revision Date: 2/29/2024 9:44:32 AM
 P.O. No: PO

Performance Data Sheet

Unit Tag	Qty	Model	Air Flow	Total Duty	Sensible Duty
BCU-2, BCU-3	2	HLF-D12	1125 CFM	- Btuh	62,612 Btuh

Unit Data

Model Size : 12	(Fans) Speed : (4) High	Filter	: N/A	Coil Tube Dia.	[in.] 1/2
Type : Horizontal Low Profile - Series D	(Motors) HP : (2) 1/10	Filter (Qty) Size	:	Tube Wall	[in.] 0.025
	Motor FLA : 1	Filter Face Area	[ft ²]	Coil Face Area	[ft ²] 3.13
	Motor Type : PSC			Weight*	[lb] 164
	Capacity : Std. Capacity				

Output Data

Altitude	[Ft.]	0
Air Flow Rate	[CFM]	1125
ESP	[in.wg]	0.09

Chilled Water Coil Data

EAT DB/WB	[°F]	80.0/ 67.0
LAT DB/WB	[°F]	60.8/ 57.8
Total Capacity	[Btuh]	32,948
Sensible Capacity	[Btuh]	24,058
EWT/LWT	[°F]	45.0/ 58.3
Fluid Flow	[gpm]	5.10
Fluid P.D	[ft.wg]	16.70
Fluid Velocity	[fps]	5.00
Rows / FPI / Circuits	:	3 Row / 12 FPI / 2 Ckt
Coil Connection Size:	[in.]	0.875

Hot Water Coil (Pre-Heat) Data

EAT DB	[°F]	70.0
LAT DB	[°F]	120.3
Sensible Capacity	[Btuh]	62,612
EWT/LWT	[°F]	180.0/ 129.4
Fluid Flow	[gpm]	2.50
Fluid P.D	[ft.wg]	2.55
Fluid Velocity	[fps]	2.50
Rows / FPI / Circuits	:	2 Row / 12 FPI / 2 Ckt
Coil Connection Size:	[in.]	0.625

Options

- BC02 24V, Unit S/S Relay / Fan Op. Relay & Transformer
- Discharge Air Sensor- OC026
- Elastomeric Closed Cell Foam Insulation
- Enclosure Mount- Unit Mounted
- Galvanized Drain pan
- OC011 Drain Pan Float Switch
- OC012 Toggle Disconnect Switch - 15 amps
- Secondary Drain Connection
- Thermostat Location- Remote Mounted Thermostat
- Thermostat- P11 Digital Programmable - 4 Pipe Heat/Cool - A/C
- Vibration Isolation
- Hot Water Coil: Piping Package Size - 1/2"
- Hot Water Coil:2 Position Close-Off (24v Only)
- Hot Water Coil:2-Way Control Valve
- Hot Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
- Hot Water Coil:Galvanized Casing
- Hot Water Coil:Left Hand Connection
- Hot Water Coil:Manual Air Vent
- Hot Water Coil:P/T Ports
- Hot Water Coil:Package Code- Code: 24 (Manual Ball Valve with Memory Stop)
- Hot Water Coil:Unions
- Hot Water Coil:Y-Strainer- Y-Strainer with Blowdown
- Chilled Water Coil: Piping Package Size - 1/2"
- Chilled Water Coil:2 Position Close-Off (24v Only)
- Chilled Water Coil:2-Way Control Valve
- Chilled Water Coil:Actuator Position- Normally Closed - 2 Pos Close-Off
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- Chilled Water Coil:Left Hand Connection
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Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#	Special Quote (SQ)#
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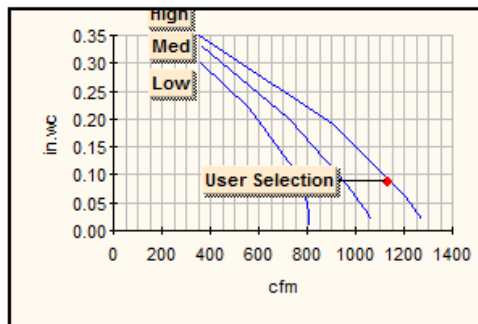
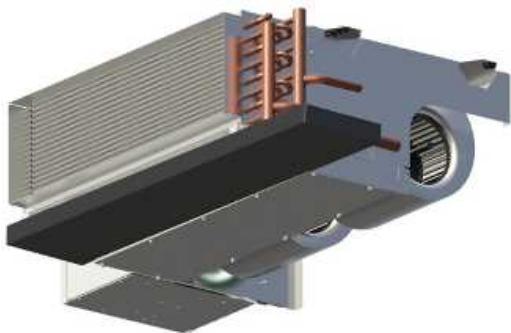
Electrical Data

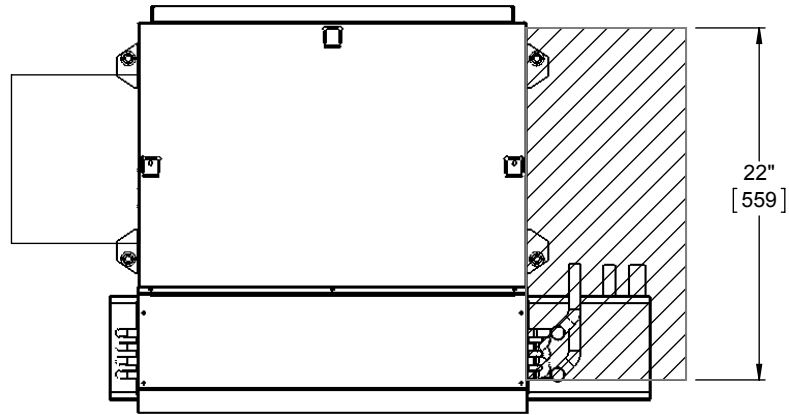
Motor Voltage	[V/P/Hz]	277/1/60
Total Full Load Amps	:	1.00
MCA / MSCP	:	1.13 / 15.00
Fan Power Input	[Watts@CFM]	222.49

Sound Data Calculated at 1125 CFM and 1150.15 RPM

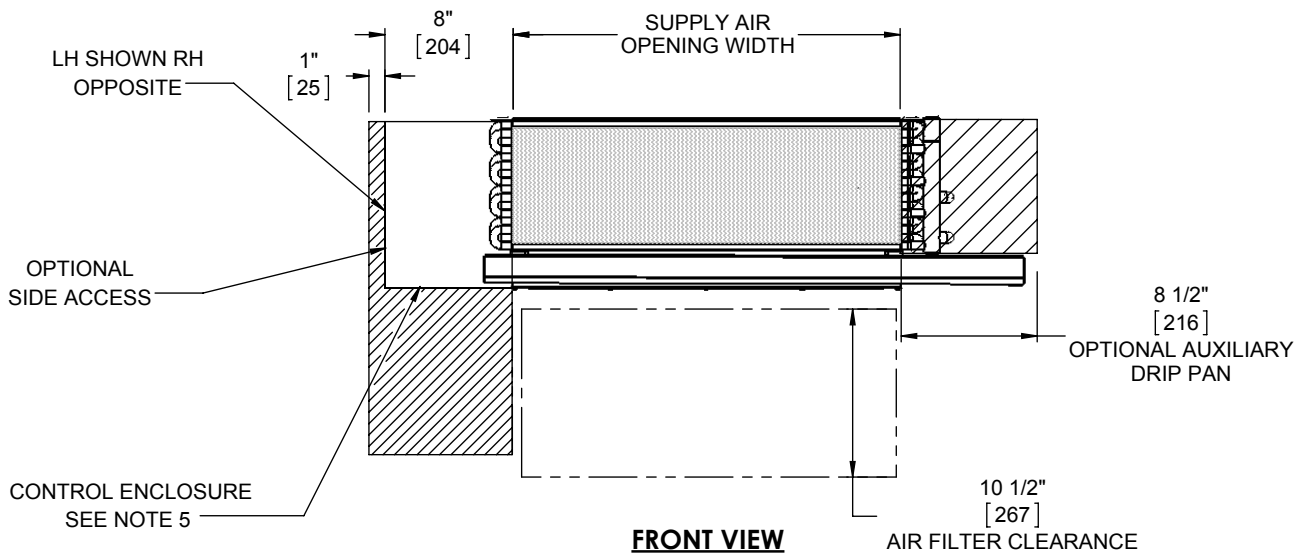
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Ducted Discharge	58	57	54	54	50	43	32
Casing Radiated Free Inlet	60	58	58	56	50	43	34

- * Unit weight includes unit with wet coil(s) as selected.
 - o Does not include accessories
- Unit pressure drop and air flow based upon dry coil as required by AHRI-440.
- Sound data tested in accordance with AHRI-260-2012
- Sound Data Calculated at 1125 CFM and 1150.15 RPM
- Scheduled motor information is for Fan Input Power at High Speed.
- For 0' altitude the coil selection has been made at Standard Conditions.





TOP VIEW



FRONT VIEW

NOTES:

1. All chilled water piping that projects beyond the condensate pan or the optional auxiliary drip pan must be field insulated by others.
2. Auxiliary drip pan shown above is optional, and is mounted on the outlet side of the drain pan.
3. Drain pan is installed with the outlet tube(s) on cooling coil connection end of coil on 4-pipe units with optional opposite end connection.
4. Dimensions shown on this drawing apply to standard CW and HW valve packages. Refer to the Piping Package Catalog for valve package code details. Contact factory for details on valve packages using non-standard or customer furnished components.
5. Provide sufficient clearance to access electrical components and comply with all applicable codes and ordinances.

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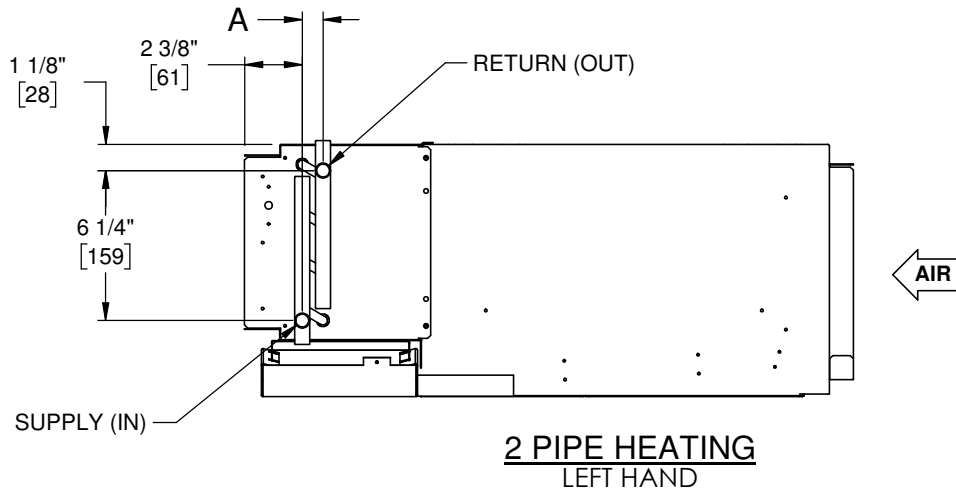
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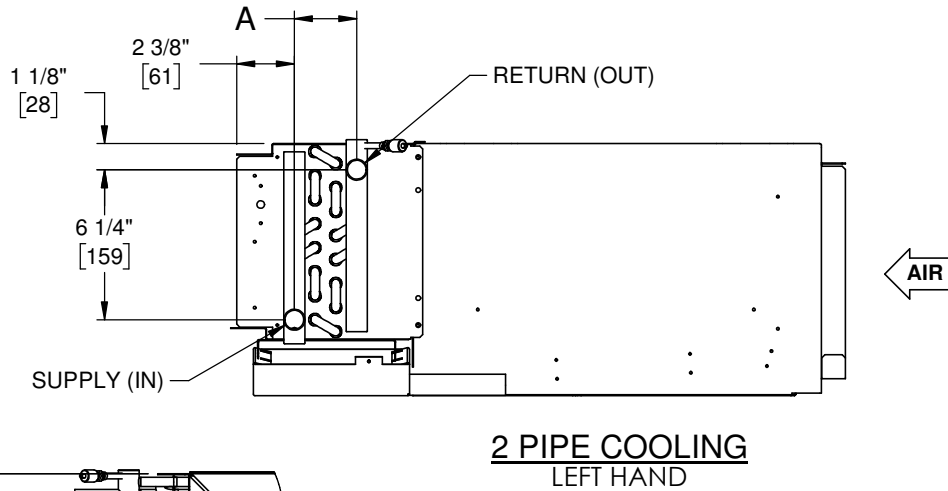
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TITLE: **MODEL HLP & HLF EXTERNAL FEATURE SPACE REQUIREMENTS**

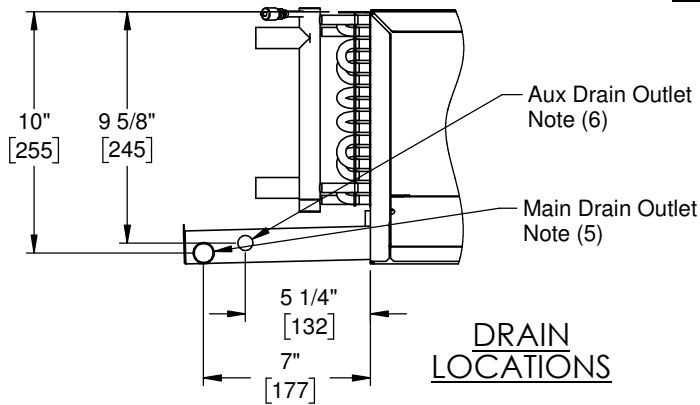
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01/18/16	PAGE 1 OF 1	47-80110	01



2 PIPE HEATING
LEFT HAND



2 PIPE COOLING
LEFT HAND



DRAIN LOCATIONS

NOTES:

- All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
- All drawings subject to change without notice.
- Model "HLP" unit shown, typical for model "HLF" units. Connections shown are internal on "HLE" units.
- Connection Size:
Chilled Water: 7/8 ODM (3/4" NOM.)
Hot Water: 5/8 ODM (1/2" NOM.)
- Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
- Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively. Aux. drain outlet is always on viewer's left when facing outlet end of drain pan, regardless of unit hand.

Unit Type	Coil Rows	A
2 Pipe Heating	1	1" [25]
	2	7/8" [22]
2 Pipe Cooling	2	1 1/8" [29]
	3	1 3/4" [44]
	4	2 5/8" [67]
	5	3 1/2" [89]
	6	4 3/8" [111]



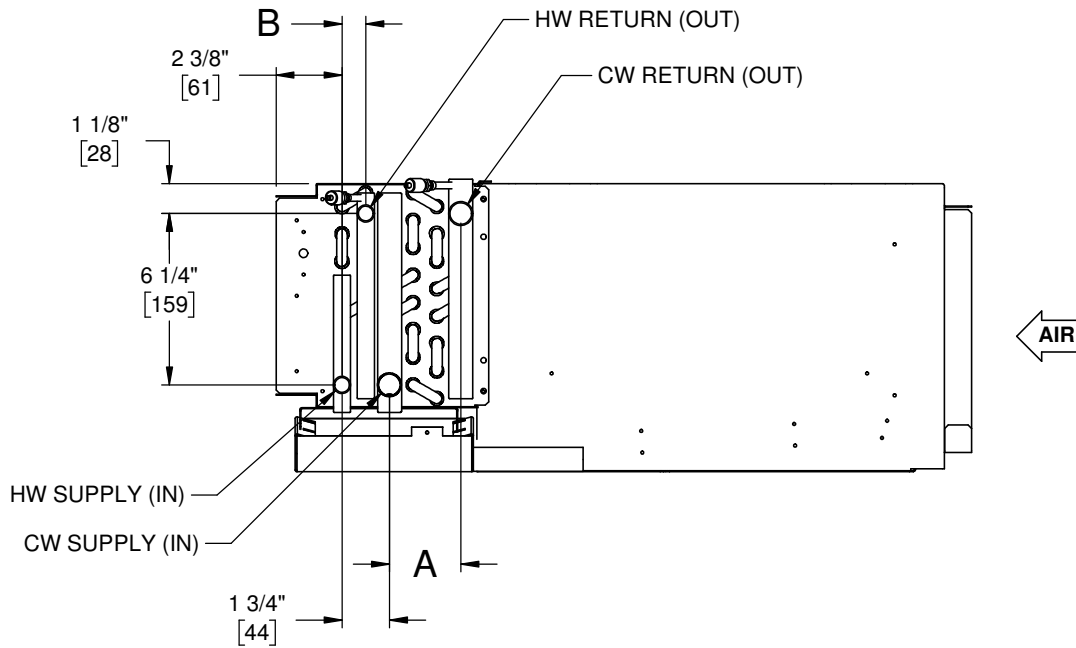
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TITLE: **MODEL HLP/F FAN COIL UNIT SERIES D WATER COIL CONNECTION LOCATIONS**

DATE	SHEET	DRAWING NO	REV
01/12/18	PAGE 1 OF 3	47-80115	01



4 PIPE RE-HEAT LEFT HAND

NOTES:

1. All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
2. All drawings subject to change without notice.
3. Model "HLP" unit shown, typical for model "HLF" units. Connections shown are internal on "HLE" units.
4. Connection Size:
Chilled Water: 7/8 ODM (3/4" NOM.)
Hot Water: 5/8 ODM (1/2" NOM.)
5. Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively. Aux. drain outlet is always on viewer's left when facing outlet end of drain pan, regardless of unit hand.

4 Pipe Re-Heat

Coil 1 Rows	A	Coil 2 Rows	B
2	1 1/8" [29]	1	1" [25]
3	1 3/4" [44]	1	1" [25]
4	2 5/8" [67]	1	1" [25]
5	3 1/2" [89]	1	1" [25]
2	1 1/8" [29]	2	7/8" [22]
3	1 3/4" [44]	2	7/8" [22]
4	2 5/8" [67]	2	7/8" [22]



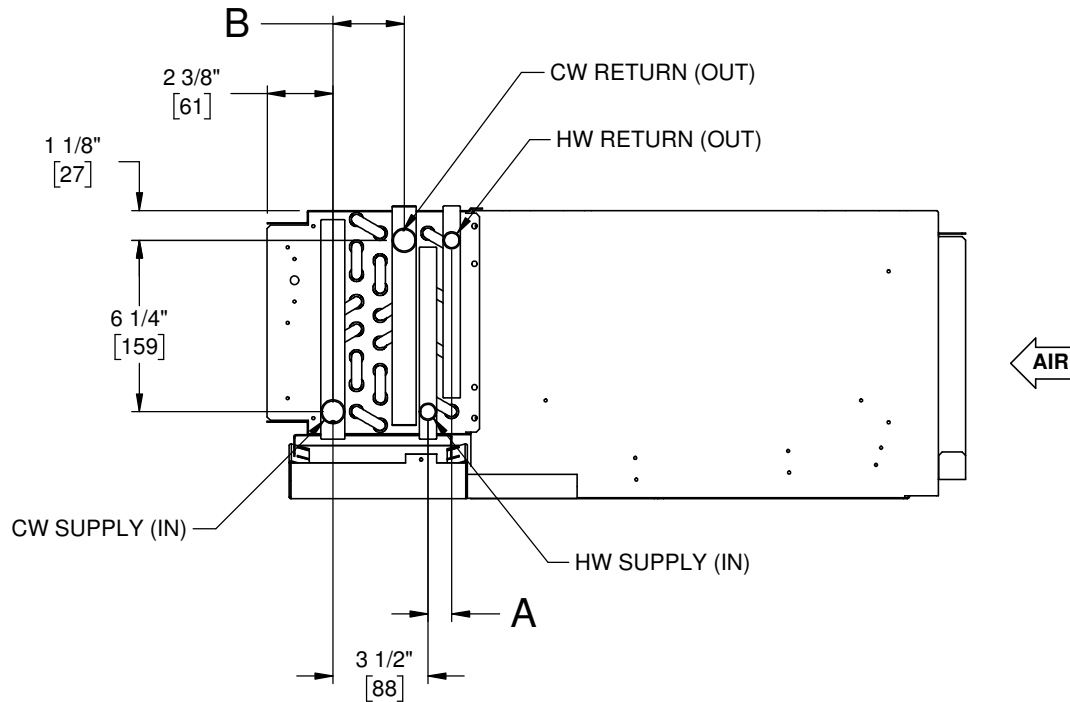
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TITLE: **MODEL HLP/F FAN COIL UNIT SERIES D
WATER COIL CONNECTION LOCATIONS**

DATE	SHEET	DRAWING NO	REV
01/12/18	PAGE 2 OF 3	47-80115	01



4 PIPE PRE-HEAT LEFT HAND

NOTES:

1. All dimensions are inches [millimeters]
All dimensions $\pm 1/2$ [13mm].
Metric values are soft conversion.
2. All drawings subject to change without notice.
3. Model "HLP" unit shown, typical for model "HLF" units. Connections shown are internal on "HLE" units.
4. Connection Size:
Chilled Water: 7/8 ODM (3/4" NOM.)
Hot Water: 5/8 ODM (1/2" NOM.)
5. Standard externally foam coated galvanize steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has 3/4" MPT galvanize steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively. Aux. drain outlet is always on viewer's left when facing outlet end of drain pan, regardless of unit hand.

4 Pipe Pre-Heat			
Coil 1 Rows	A	Coil 2 Rows	B
1	1" [25]	2	1 1/8" [29]
1	1" [25]	3	1 3/4" [44]
1	1" [25]	4	2 5/8" [67]
1	1" [25]	5	3 1/2" [89]
2	7/8" [22]	2	1 1/8" [29]
2	7/8" [22]	3	1 3/4" [44]
2	7/8" [22]	4	2 5/8" [67]



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**TITLE: MODEL HLP/F FAN COIL UNIT SERIES D
WATER COIL CONNECTION LOCATIONS**

DATE	SHEET	DRAWING NO	REV
01/12/18	PAGE 3 OF 3	47-80115	01



Project Name: CALS Main Library Renovation
 Location:
 Consultant/Engineer:
 Contractor:
 Sold To:
 P.O. No: PO

ETI Contract No: Contract #
 Coil Version: 4.28a
 Printed Date: 5/8/2024 12:51:10 PM
 Selection Date: 2/29/2024 9:57:28 AM
 Last Revision Date: 2/29/2024 9:58:28 AM

Performance Data Sheet

Unit Tag BCU-1	Qty 1	Model VDD12	Air Flow 1000 CFM	Total Duty 33.8 MBH	Sensible Duty 24.2 MBH	Weight 298 lb
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Unit Data

Model Size : 12	Motor Qty : 1	Filter : 2" 30% Pleated (MERV 8)	Coil Tube Dia. [in.] 0.52
Type : Direct Drive Blower Coils	Motor FLA : 4.10	Filter (Qty) Size : (1) 16x25x2	Tube Wall [in.] 0.016
Motor Type : Direct Drive ECM	Fan Amps@CFM : 2.27	Filter Face Area [ft²] 2.8	Coil Face Area [ft²] 2.7
Motor HP : 1/2	Fan RPM@CFM : 1306		

Output Data

Altitude [Ft.]	0
Air Flow Rate [CFM]	1000
ESP [in.wg]	0.50
TSP [in.wg]	0.98

Chilled Water Coil Data

EAT DB/WB [°F]	80.0/ 67.0
LAT DB/WB [°F]	58.3/ 56.3
Total Capacity [MBH]	33.8
Sensible Capacity [MBH]	24.2
EWT/LWT [°F]	45.0/ 55.4
Fluid Flow [gpm]	6.50
Fluid P.D [ft.wg]	8.80
Fluid Velocity [fps]	3.70
Rows / FPI / Circuits :	4 Row/ 8 FPI / 3 Ckt
Coil Connection Size: [in.]	0.875

Hot Water Coil (Pre-Heat) Data

EAT DB [°F]	70.0
LAT DB [°F]	114.0
Sensible Capacity [MBH]	47.9
EWT/LWT [°F]	180.0/156.6
Fluid Flow [gpm]	4.20
Fluid P.D [ft.wg]	1.72
Fluid Velocity [fps]	2.40
Rows / FPI / Circuits :	2 Row/ 8 FPI / 3 Ckt
Coil Connection Size: [in.]	0.625

Options

- Access Door- Standard
- Base Rails- Base Rails
- Control Enclosure Location- Standard
- Disconnect Switch- Door Interlock Disconnect Switch (40 Amp Non-Fused)
- Drain Pan Float Switch- Drain Pan Float Switch
- Drain Pan Handing- Right Hand
- Drain Pan Material- IAQ Galvanized
- External Vibration Isolators- Rubber In Shear
- Filter Type- 2" 30% Pleated (MERV 8)
- Hand-Off Auto Switch- Hand-Off Auto Switch
- Inlet Option- None
- Insulation Type- Standard Fiberglass
- Isolator Location- Floor Mounted
- Motor Control- Select (3 Speed Adjustable)
- Motor Handing- Right Hand
- Motor Type- Direct Drive ECM
- Speed Switch- OC019 Unit Mounted 3 Speed Switch with Off Position
- Unit Arrangement- Fan Arr. 3 (Horiz. Top Front)
- Hot Water Coil:Coil Casing Material- Galvanized
- Hot Water Coil:Coil Handing- Right Hand
- Hot Water Coil:Tube Wall- 0.016 in.
- Chilled Water Coil:Coil Casing Material- Galvanized
- Chilled Water Coil:Coil Handing- Right Hand
- Chilled Water Coil:Tube Wall- 0.016 in.

Special Quote (SQ)#
 Special Quote (SQ)#

Special Quote (SQ)#
 Special Quote (SQ)#

Special Quote (SQ)#
 Special Quote (SQ)#

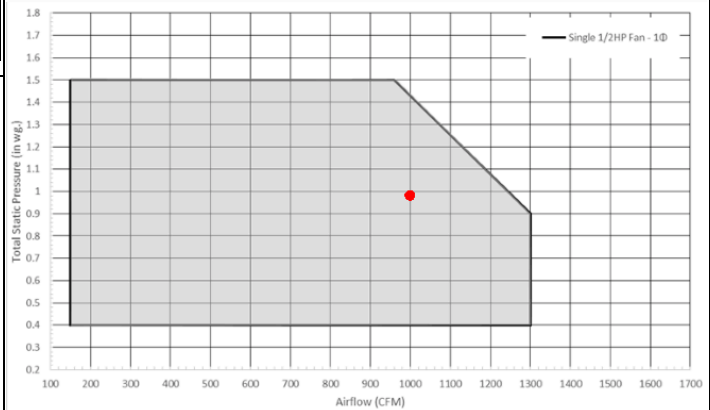
Electrical Data

V/P/HZ :	277/1/60 ECM
Total Full Load Amps :	4.10
MCA / MSCP :	5.13 / 15.00
Fan Power Input [Watts@CFM] 375	

- Unit weight includes unit wet coil(s) as selected.
- Coils are manufactured in accordance with AHRI-410.

Sound Data Calculated at 1000 CFM, 0.98 in.wg, and 1306 RPM

	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Ducted Discharge	78	80	70	69	69	66	63	57
Casing Rad. Free Inlet	68	63	61	56	57	51	46	39

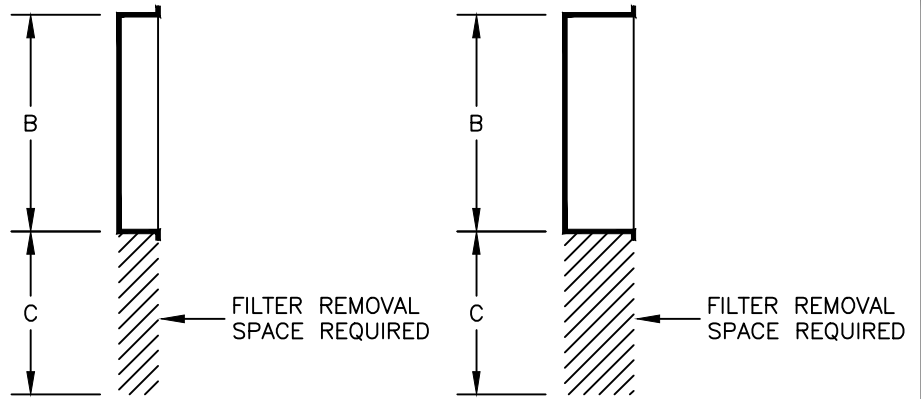


Unit Operating Conditions

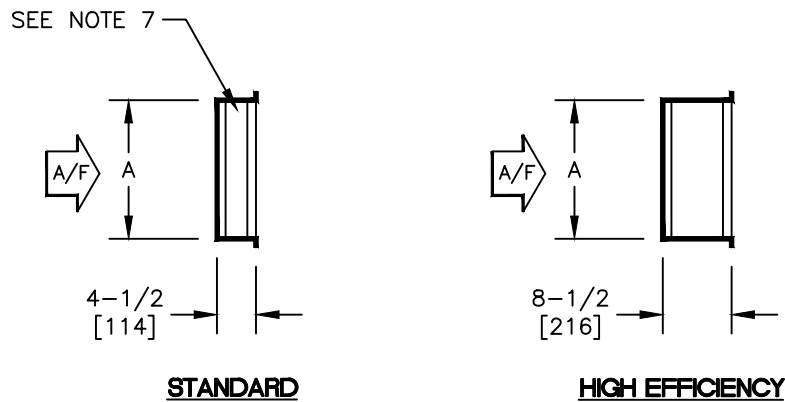
Unit Size	Fan Size	Airflow		Mechanical		
		CFM	TSP	RPM	HP	QTY
12	09-06	1000	0.98	1306	1/2	1

NOTES:

1. All dimensions are Inches [millimeters].
All dimensions $\pm 1/4"$ [6mm].
Metric values are soft conversion.
2. Flat filter rack may be located at unit inlet as required.
3. Standard rack will accept nominal 1" or 2" thick filters.
4. High eff. rack will accept nominal 2" and/or 4" thick filters.
5. High eff. rack not available on "HM" and "VM" units.
6. 1" duct connection space provided on entering side of rack for connection of field ductwork.
7. Hinged cover provided on both sides of externally mounted filter racks. Internal standard filter racks have pivoting bar type filter retainer.
8. See individual unit submittal drawings for location of filter rack on unit.



TOP VIEWS



SIDE VIEWS

DIMENSIONS - In [mm]

UNIT SIZE	A	B	C	QTY & SIZE FILTERS
08	16 [406]	20 [508]	20 [508]	(1) 16 X 20
12	16 [406]	25 [635]	25 [635]	(1) 16 X 25
16	16 [406]	39-1/2 [1003]	20 [508]	(2) 16 X 20
20	16 [406]	44-1/2 [1130]	25 [635]	(1) 16 X 20 (1) 16 X 25
30	25 [635]	51 [1295]	25 [635]	(2) 16 X 25 (1) 20 X 25
40	25 [635]	59 [1499]	25 [635]	(3) 20 X 25

TITLE: MODEL HDD/VDD
DIRECT DRIVE BLOWER COIL UNIT
STANDARD FLAT FILTER RACK



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CKD BY: CV	DATE: 05/09/18	REV: 00	

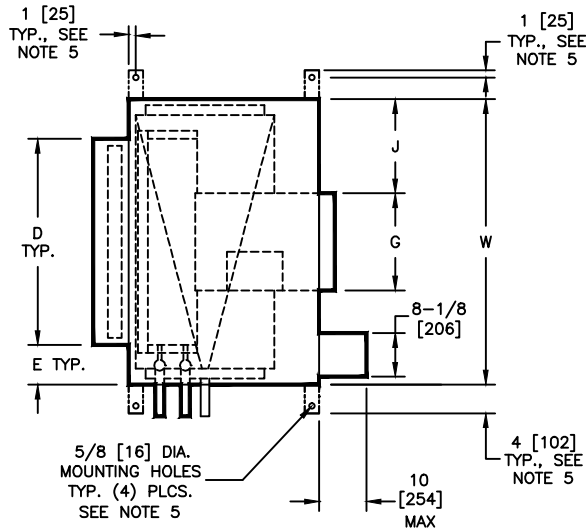
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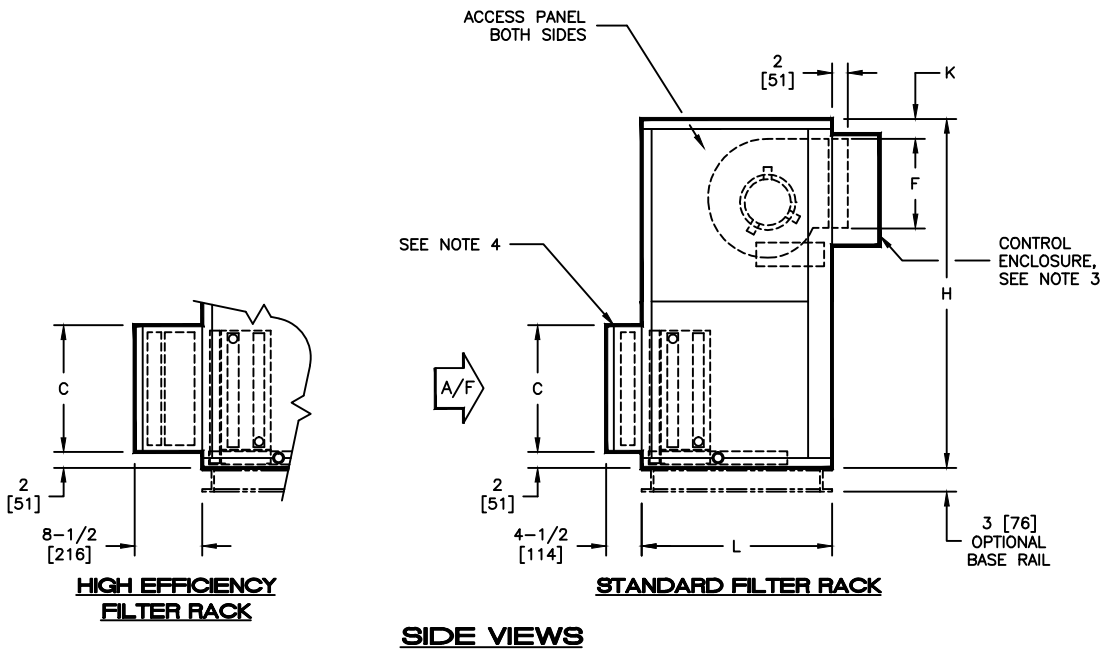
35-80048

NOTES:

1. All dimensions are Inches [millimeters]. All dimensions are $\pm 1/4"$ [6mm]. Metric values are soft conversion.
2. Right hand unit shown, left hand unit opposite. Motor/drive location may be specified Left or Right Hand. Standard control enclosure location matches motor/drive position.
3. Provide sufficient clearance to permit access to controls and comply with applicable codes and ordinances.
4. See drawing FR-001 for filter rack details.
5. Base rail is optional on the base unit. See drawing BR-001. Base rails must be used with mixing box.
6. See coil connection detail drawings for coil connection sizes and locations.



TOP VIEW



SIDE VIEWS

DIMENSIONS

SIZE	FAN SIZE	L	W	H	C	D	E	F	G	J	K
08	9 X 6 [229 X 152]	24 [610]	30 [762]	44 [1118]	16 [406]	20 [508]	5 [127]	10-3/8 [264]	8-3/8 [213]	10-7/8 [276]	2 [51]
12	9 X 6 [229 X 152]	24 [610]	36 [914]	44 [1118]	16 [406]	25 [635]	5-1/2 [140]	10-3/8 [264]	8-3/8 [213]	13-7/8 [352]	2 [51]
16	10 X 8 [254 X 203]	24 [610]	44 [1118]	44 [1118]	16 [406]	39-1/2 [1003]	2-1/4 [57]	11-1/2 [292]	10-5/8 [270]	16-3/4 [425]	2 [51]
20	10 X 8 [254 X 203]	30 [762]	50 [1270]	50 [1270]	16 [406]	44-1/2 [1130]	2-3/4 [70]	11-1/2 [292]	10-5/8 [270]	19-3/4 [502]	2 [51]
30	10 X 8 [254 X 203]	30 [762]	59 [1499]	56 [1422]	25 [635]	51 [1295]	4 [102]	11-1/2 [292]	10-5/8 [270]	24-1/4 [629]	5-1/2 [140]
40	10 X 8 [254 X 203]	30 [762]	68 [1727]	59 [1499]	25 [635]	59 [1499]	4-1/2 [114]	11-1/2 [292]	10-5/8 [270]	28-3/4 [730]	5-1/2 [140]

TITLE:

MODEL VDD
DIRECT DRIVE BLOWER COIL UNIT
BASIC UNIT - DISCHARGE ARG. 3



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CKD BY: CV	DATE: 04/18/18	REV: 00	

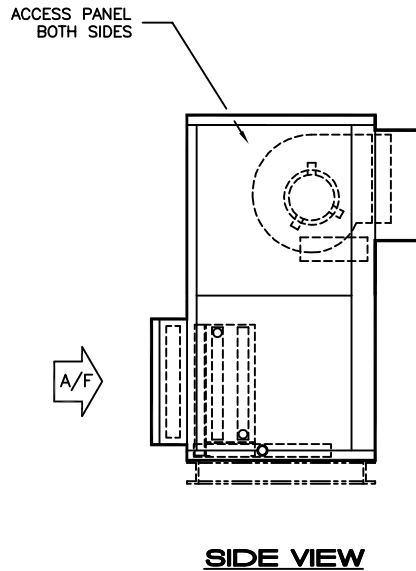
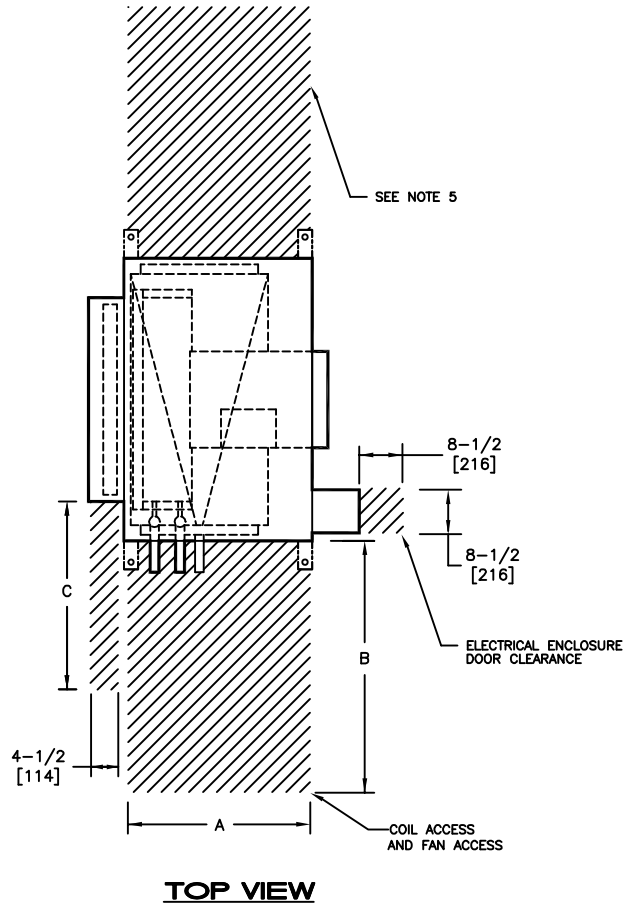
37-80021

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NOTES:

1. All dimensions are Inches [millimeters].
All dimensions are $\pm 1/4"$ [6mm]. Metric values are soft conversion.
2. Right hand unit shown, left hand unit opposite.
Motor/drive location may be specified Left or Right Hand. Standard control enclosure location matches motor/drive position.
3. Provide sufficient clearance to permit access to controls and comply with applicable codes and ordinances.
4. Flat filter rack may be located at unit inlet as required. See drawing 35-80048 for filter rack details.
5. Dual Blower units require service access to both side access panels for motor/blower removal.



DIMENSIONS

SIZE	A	B	C
08	19 [483]	30 [762]	20 [508]
12	19 [483]	36 [914]	25 [635]
16	19 [483]	44 [1118]	20 [508]
20	25 [635]	50 [1270]	20 [508]
30	25 [635]	59 [1499]	20 [508]
40	25 [635]	68 [1727]	20 [508]

TITLE: MODEL VDD
DIRECT DRIVE BLOWER COIL UNIT
EXTERNAL SPACE REQUIREMENT



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CKD BY: JK	DATE: 11/2/21	REV: A	

37-80032

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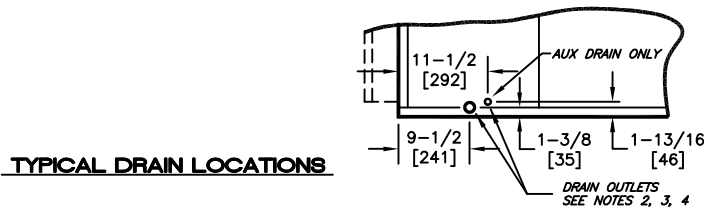
FIG. 1
RIGHT HAND HEATING OR COOLING ONLY LEFT HAND



FIG. 2
RIGHT HAND HEATING + COOLING
HW COIL IN RE-HEAT POSITION LEFT HAND



FIG. 3
RIGHT HAND HEATING + COOLING
HW COIL IN PRE-HEAT POSITION LEFT HAND



NOTES:

- All dimensions are Inches [millimeters]. All dimensions are $\pm 1/2"$ [13mm]. Metric values are soft conversion.
- Standard galvanized IAQ drain pan has 1-1/8" ODM copper connection on one side.
- Stainless Steel IAQ drain pan has 1" stainless Sch. 40 threaded steel connection on one side only. Optional Aux connection is 3/8" stainless sch. 40 threaded steel.
- Horizontal unit shown. Coil connection locations are typical for vertical units relative to lower bottom corner at entering air side.

TITLE: BLOWER COIL UNIT WATER HEATING & COOLING COIL COIL CONNECTION LOCATION			
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CKD BY: TW	DATE: 12/03/19	REV: A	CCC-001
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